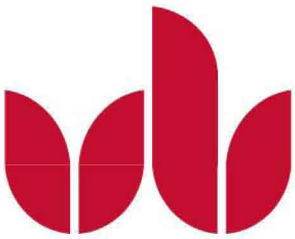

Public Health Masters

To compare the level of Knowledge/Awareness of sexual risk behaviour related to HIV/AIDS among people from the Niger Delta and Abuja regions: A Survey?

Submitted in partial fulfilment for the award of Msc Public Health

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DISSERTATION

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ABSTRACT

Background

The Niger Delta and Abuja regions in Nigeria have distinct cultural and demographic profiles that could shape levels of awareness and risky sexual behaviour related to HIV/AIDS. HIV/AIDS prevalence is high in Nigeria and this could be linked to intrinsic factors such as high poverty and low educational level among indigenes in the Niger Delta, and extrinsic factors such as presence of migrant oil company workers, and impact of having 3 out of 5 Nigeria seaports in the region. In contrast Abuja is the political capital of the country and this has resulted in an influx of people into the region both nationally and globally, seeking greener pastures. These factors are likely to influence population in these two areas and their responses. Studies have looked at the level of awareness about HIV/AIDS in Nigeria, but this study will be the first to compare two regions.

Objective

This study compared levels of Knowledge, awareness and high risk sexual behaviours among people from Niger Delta and those from the federal capital territory Abuja.

Method

A convenience sample of 200 customers half of which visited a pharmacy shop in the Niger Delta and the other half a pharmacy shop in Abuja over a 3 week period completed questionnaires administered to them by the author. Questions covered demographics, awareness level and sexual risk behaviours relating to HIV/AIDS. Responses to questions were compared using basic statistical analytic techniques.

Results

There was a high level of awareness among the Niger Delta and Abuja respondents although the Abuja respondents showed a higher level of awareness in comparison to the respondents from the Niger Delta. The Niger Delta respondents however, had a higher level of knowledge but were more likely to engage in high risk sexual behaviour compared to the Abuja respondents.

Conclusion

High levels of knowledge and awareness about HIV/AIDS are not associated with low levels of risky sexual behaviour, the Niger delta respondents despite having a reduced level of awareness are more like to be involved in high risk sexual behaviour than their Abuja respondents. Further research is needed using more robust methods and larger samples to explore and compare these issues.

DECLARATION

I declare that this is my unaided work. It is being submitted for a degree of Master of Science in Public Health at the University of Bedfordshire. It has not been previously submitted for any exam or degree in any other institution.

DEDICATION

This work is dedicated to the following: first to God, for his grace and mercy; secondly to my loving and caring Mum Mrs comfort Ebenezer

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CHAPTER ONE: INTRODUCTION

1.1: OVERVIEW OF THE DISSERTATION

This dissertation is divided into 5 different chapters.

Chapter one presents an overview of the structure and content of the project, background of HIV/AIDS in the sub Saharan Africa, with particular reference to the Niger delta and Abuja, the justification/rationale of the research work, and aims and objectives of the study.

Chapter two presents the literature review, exploring the methodology/criteria for selection of reviewed articles, the actual literature review on awareness/knowledge and risky sexual behaviour concerning HIV/AIDS in sub Saharan Africa.

Chapter three discusses the research approach, research design, the survey methodology used for the work, data collection tool, sample size and technique ,inclusion and exclusion criteria, data safe keeping, data analysis and ethical issues, cost of work and time scale involved in the study.

Chapter four presents the results obtained in the course of the research work, discussing the results obtained, and presenting recommendations given by the author and the conclusion of the research work.

Chapter five discusses the plans for dissemination of the research work, some reflections on learning and limitations of the study.

1.1: BACKGROUND

Acquired ImmunoDeficiency Syndrome (AIDS) is caused by infection with the Human Immunodeficiency Virus (HIV) which attacks and breaks down the body's immune system (Hawker et al, 2005; Irving et al, 2005; Wilson, 2006). The syndrome AIDS is the most advanced stage, encompasses inapparent HIV infection through to clinical infection and these combined with other factors increases risk of developing opportunistic infections such as Tuberculosis, Pneumocystis Carinnii Pneumonia (PCP) (Irving et, al 2005; Wilson, 2006; Webber, 2005).

HIV infection is detected by blood tests for CD4 and CD8 lymphocytes, viral loads and antibodies against the virus (UNAIDS, 2007). Clinical diagnosis combines blood test results with symptoms, history, and physical signs (Webber, 2005; Irving, 2005; Wilson, 2006). Globally, over 33.2 million people live with HIV/AIDS, most are adults with only 2.5 million being children (UNAIDS, 2007). Over 2.5 million new cases of the disease were recorded in 2007 of which 2.1 million were adults, while over 2.1 million people died from HIV/AIDS in the same year (UNAIDS, 2007). Sub Saharan Africa has the highest level of HIV/AIDS and associated impacts in the world, with about 22.5 million people living with HIV and approximately 1.7 million people newly infected with HIV in 2007 (UNAIDS, 2007). The UNAIDS (2007) report further stated that the HIV/AIDS pandemic has claimed the lives of about 1.6 million people in this region and over 11 million children have become orphaned due to HIV/AIDS.

International, regional and national efforts have focused on possible cures for HIV/AIDS with limited success so far. Similarly, ongoing attempts to develop a vaccine have proven unsuccessful forcing attentions to shift to exploring alternative methods for preventing spread of the disease (Hawker et al, 2005; streicher et al, 2000).

From the foregoing, it can thus be argued that knowledge and understanding of the disease among people suffering from the disease and those staying close to them are essential for effective prevention. Preventive methods will have limited impact in

the presence of high prevalence of risky sexual behaviour or if levels of risky sexual behaviour are not known (UNAIDS, 2007). Knowledge about HIV/AIDS and risky sexual behaviours is important in the sub Saharan African context because of high incidence and prevalence of HIV/AIDS. This can be extended to South African and Nigeria two countries with the highest levels of HIV/AIDS prevalence.

The next section covers the background to HIV/AIDS within the Nigerian context.

1.3: BACKGROUND TO HIV/AIDS IN NIGER DELTA AND ABUJA

According to the National HIV/AIDS Sentinel Survey (2005), undertaken by the Federal Ministry of Health (FMH), the South -South zone of Nigeria located in the Niger Delta has the second highest prevalence of HIV/AIDS in the country, especially among the 20-24 age groups. This implies that the future generation are mostly at risk of infection and negative impacts of the disease. The Niger delta region also has the highest number of single pregnant mothers suffering from the disease, focusing the problems relating to HIV/AIDS in a wider context and on reproductive health.

The Niger Delta region also has high levels of poverty, and these poverty levels have increased from 28.1% in 1980 to about 54.4% in 2004 (National Bureau of Statistics, 2005; UNDP, 2006). People in the region in particular the young and teenage girls experience severe poverty to the point of having little or nothing to eat thereby forcing them to engage in commercial or risky sexual activity as a means of survival.

According to Udonwa et al (2004), the problem is compounded by the presence of oil in the region, with constant influx of different oil and allied companies from different parts of the world into the region, and by extension a significant migrant worker population. The blessing of bringing wealth to the region is accompanied by the curse of health problems among locals (UNDP, 2006). Migrant workers come seeking opportunities from oil production, but the huge amounts of money obtained from the oil industries then enable these workers to afford token fees for casual or risky sex from local girls and women. This argument is buttressed by the study by

Nwauche et al (2006) which showed High levels of Risky Sexual Behaviour (HRSB) among migrant oil workers in the Niger Delta region. In contrast the federal capital Abuja is the political/administrative headquarters of the federal republic of Nigeria. The city is home to different Federal Parastatals. All major occasions nationally and internationally are held in the city. Furthermore the city is home to Aso rock the political home of the president, senate and House of Representatives. This has led to an influx of different people within and outside the country into the city, and this the author argues could result in an increase in risky sexual behaviour. These factors the author suggests might lead to an increase in risky sexual behaviour in the region, owing to the fact that most of these people attending meetings in the city (Abuja) most times do not come with their families. The matter is further compounded by the fact that most people visiting or staying in Abuja are wealthy or live above average and so can easily pay any price for casual sex. Thus propagating high risk sexual behaviours.

HIV/AIDS in the Niger Delta is higher than the national average, for instance in 2005 alone, this was 5.3% compared to 4.4% nationally (Nigeria) (FMH, 2005). Economic costs of HIV/AIDS in the region cannot be accurately quantified, but it is apparent that high levels of productive man-hours for economic production, development and services are lost to sickness absence/inactivity among the infected or to taking care of family members affected by the disease. Furthermore, over ten thousand children have been orphaned because of the disease, and these children are exposed to hunger, starvation, and problematic development because of destruction of the basic social support systems (UNAIDS, 2007). Impact on family life from the disease includes social and economic costs where farmers can no longer engage fully in food and cash crop production which could contribute to the regional and national economy and feed the local population, thus affected farmers and their children end up depending on relatives for food to survive. Adequate steps should therefore be taken to prevent the virus from spreading and by extension prevent the pandemic from paralysing all sectors of the local, regional, and national economy (Udonwa et al 2004).

1.4: RATIONALE FOR THE PROJECT

HIV/AIDS remains a clear and important problem to the people of the Niger Delta and Abuja, and to the nation as a whole. There is a high prevalence of HIV/AIDS in the region coupled with a high level of under development and poverty, and a high movement of migrant oil workers in and out of the region, with resultant high tendencies for unsafe sex (Nwauche et al 2006). The afore mentioned factors, highlight the importance of the problem, and equally importantly underscores the need to research on levels of awareness/knowledge and risky sexual behaviours among people in these regions (Niger Delta/Abuja) in order to identify possible causes for the spread of the disease and subsequently develop strategies to mitigate the spread and impact of HIV/AIDS.

Judging from the above facts the urgent need for the assessment of the level of awareness of the people of these regions to the possible spread of HIV/AIDS is necessary.

1.5: PROJECT AIMS AND OBJECTIVES

The aim of this project is to assess and compare levels of awareness/knowledge about HIV/AIDS and risky sexual behaviours among people from the Niger Delta region and those from Abuja.

Specific objectives for the project are:

- To assess and compare the levels of awareness/knowledge about the possible spread/cause of HIV/AIDS among people from Niger Delta and those from Abuja.
- To assess and compare the levels of risky sexual behaviour among people from the Niger Delta region and Abuja.
- To draw conclusions and make appropriate recommendations to organisations that provide sexual health services and those involved in research in the two regions and nationally.

Having presented the background, rationale, aim, and objectives of this research, the author now looks at the literature surrounding knowledge/awareness and sexual risk behaviour among teenagers, parents and pregnant women in Sub Saharan Africa.

CHAPTER TWO: LITERATURE REVIEW

2.1: INTRODUCTION

The prevalence of the HIV/AIDS Epidemic in the Sub Saharan Africa has been presented within the introduction and background of this work and they clearly set the perspective or framework within which this research has been undertaken and reveal the motivating forces that support the need for this research. Having proved the circumstance and justification for the research, this chapter presents an extensive review of relevant literature on studies carried out in the different areas/regions of sub-Saharan Africa, on teenagers among the 16- 19 years age group, parents, and pregnant mothers in relation to their level of awareness/knowledge of HIV/AIDS and their level of risky sexual behaviour. This chapter is divided into two parts. The first part presents the literature search strategy, and criteria for including the studies reviewed in this work. The second part covers an extensive discussion of relevant studies undertaken in the region of Sub Saharan Africa.

2.2: LITERATURE SEARCH STRATEGY

The aim of the literature review was to appraise existing important works covering HIV/AIDS, risky sexual behaviour, awareness/knowledge about the former two issues. Important works were deemed to contain information from research, debates, and programmes relating to the three issues mentioned above. The search process for this work involved searching different databases such as the organisational databases of the UNAIDS, GHAIN, UNICEF, UN, USAID, and National Action Committee on AIDS (NACA), and websites of different HIV/AIDS research bodies in Nigeria, South Africa, Kenya, United States of America, and the United Kingdom. Other databases accessed include Science direct, Pubmed, Blackwell synergy, BIO Med Central, Lancet and Embase. The United Nations AIDS report was also included in the study. In addition, the author consulted academics at the University of Bedfordshire involved in the field. Finally the search involved follow up of key references cited in articles identified from initial searches.

Studies conducted within and focusing on sub Saharan Africa were selected for inclusion in the review. It was deemed appropriate to focus on sub Saharan Africa because of the high prevalence of HIV/AIDS in the region which makes it an important health problem in the region and in turn the region an important epicentre for the problem. Furthermore, it was appropriate to focus in sub Saharan Africa because findings/evidence from the a forenamed region are likely to have geopolitical, social, demographic, health, and economic similarities to the Nigerian context.

The following key words and terms were used to conduct the literature search: “awareness studies and HIV/AIDS”, “knowledge/awareness studies and HIV/AIDS”, “HIV/AIDS and sub Saharan Africa”, “Comparative studies and HIV/AIDS”, “sexual risky behaviours and HIV/AIDS”, “HIV/AIDS and women and 16-40 years and above”, “HIV/AIDS and men and 16-40 years and above”. These words and terms were used alone and in combination. A total of 90 articles were accessed and after review of abstracts and summaries, 30 of the papers were selected for review. On closer review of the full documents/articles, 15 were chosen and used for the final literature review. These were then critically appraised generating key notes and themes used for writing up the review reported here.

Inclusion criteria

Identified works were selected using the following criteria:

- Published in English
- Focus on sexually active (16^{+}yrs) age groups
- Focus on HIV/AIDS awareness/knowledge, risky sexual behaviours and knowledge of mother to child transmission of HIV/AIDS
- Publications from 2002 till 2008
- Focus on sub Saharan Africa

Abstracts and summaries of accessed works were reviewed to check for relevance according to the criteria above.

Exclusion criteria

Accessed works were excluded from the review if they focused on HIV/AIDS screening, and where they failed to meet the inclusion criteria.

The next sections cover different themes that emerged from reviewing the literature by geographic (Southern, Eastern, Western, and Central) regions of sub Saharan Africa.

2.3: SOUTHERN REGION OF SUB SAHARAN AFRICA

2.3.1: Overview

Southern Africa covers Angola, Botswana, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, South Africa, Zimbabwe, Swaziland and Zambia. According to the UNAIDS (2007) there is a high prevalence of HIV/AIDS in the Southern Africa region and this region is also the most seriously affected by (HIV/AIDS). The report further stated that 35% of the global burden of disease for HIV/AIDS is in Southern Africa and that the region accounts for nearly one-third (32%) of newly affected and total deaths from HIV/AIDS respectively in 2007, a prevalence level which is twice that in Western, Eastern, and Central Africa (UNAIDS, 2007). In spite of the high prevalence and mortality, levels of awareness/knowledge about the disease vary among teenagers between the ages of 16-19 years, parents and pregnant mothers 16-40 years of age (UNAIDS, 2007). Awareness is highest in the teenage groups and lowest in the pregnant mothers group. This implies firstly that pregnant mothers in the region need interventions to improve knowledge/awareness about HIV/AIDS especially as regards mother to child transmission. Secondly, it implies that there is a need to investigate factors that could account for all these variations and perhaps use findings from this research to inform formulation of interventions. This now leads to a review of the awareness/knowledge level and sexual risk behaviours of teenagers between the ages of 16-19 years.

2.3.2: Awareness/knowledge among teenagers (16-19years)

Findings from the UNAIDS (2007) revealed that the levels of HIV/AIDS among teenagers in Southern Africa has been on the increase.

Research by Sibanda et al, (2002) on “Awareness of the risks of HIV infection by Zimbabwean urban and rural high school attendees” revealed that from a total of 241 teenagers (153 boys and 89 girls), more than half of the pupils were sexually active; 49% of which were girls and 48% of which were boys. The study further revealed that more students from the rural areas were likely to engage in risky sexual behaviour in comparison to their urban counterparts (Sibanda et al, 2002). A higher number of urban school attendees also reported personal knowledge of HIV/AIDS in comparison to their rural counterparts (Sibanda et al, 2002). The above findings by Sibanda et al (2002) have a bearing on recent observations by the UNAIDS (2007) which revealed that the awareness/knowledge level of HIV/AIDS amongst teenagers in urban and rural areas varies considerably with the urban populations showing more knowledge/awareness. These results clearly show a geographic if not socioeconomic variation in awareness among teenagers of HIV/AIDS, suggesting first the need for targeted awareness programmes for preventing HIV/AIDS and other sexually transmitted infections. Secondly, these results suggest deeper underlying socioeconomic disparities (beyond awareness) between urban and rural teenagers; these will need to be addressed to ensure equitable health.

It is not clear how the sample for the Sibanda et al (2002) study was gotten, however anonymous questionnaires were used during the study, which increased chances of participants freely expressing their true views. This in turn increased the reliability of study results (Newell 2006; Bowling 2002) and by extension usefulness for policy and practice.

Subsequent to the Sibanda et al (2002) study, Terry et al (2006) carried out a research entitled “An examination of knowledge, and attitudes related to HIV/AIDS prevention in Zimbabwean university students: comparing intervention program participants and non–participants.” The research entailed a comprehensive assessment of the differences between participants in a HIV/AIDS prevention program called SHAPE (Sustainability, Hope, Action, Prevention, and Education) and non-participants. The assessment was based on knowledge, attitudes and

practise amongst 933 randomly selected students at the University of Zimbabwe. A cross sectional survey was used in carrying out this research between those involved in the SHAPE intervention programme and those not involved in it. The result showed that those involved in the SHAPE intervention program were more knowledgeable about HIV/AIDS, understood prevention benefits of condoms and had less sexual partners, thus practising less risky sexual behaviour when compared with their counterparts that were not involved in the SHAPE intervention programme.

These results firstly addressed feasibility issues arising from recommendations from the Sibanda et al (2002) study about the need for youth awareness programmes for preventing the spread of sexually transmitted diseases including HIV/AIDS. Secondly the results show that such interventions can actually be effective in increasing awareness and influencing sexual behaviour. The Terry et al (2006) study unlike that by Sibanda et al (2002) clearly has higher external validity because participants were randomly sampled (Newell and Burnard 2006). This implies that the results are likely to be more appropriate for informing practice and design of programmes.

Overall, upon consideration of the findings from Sibanda et al (2002), which revealed the lop-sided nature of knowledge/awareness on HIV/AIDS in Zimbabwe between the rural and urban school attendees, a useful tool which can be adapted in other regions of Southern Africa, would be the sexual health policy developed by the government of South Africa in 2003 to increase knowledge and awareness on HIV/AIDS amongst rural and urban populations (South African Sexual Health Policy, 2003). The sexual health policy entitled the “life and school policy of 2003” was made compulsory in all schools in South Africa and was expected to bring about a universal knowledge on HIV/AIDS among the students. The South African sexual health policy if adapted by other southern African countries it can be argued could result in a balance of the lop-sided nature of knowledge/awareness between rural and urban populations observed in the study by Sibanda et al (2002). This now leads us to the awareness/knowledge studies carried out on parents in the region.

2.3.3: Awareness/knowledge among Parents

Although the awareness about HIV/AIDS among parents in the Southern African region has been reportedly high, prevalence of HIV/AIDS has been on the increase in some parts of the region (UNAIDS 2007). Research by Williams et al (2003) entitled "Changing patterns of knowledge, reported behaviour and sexually transmitted infections in a South Africa gold mining community", which was carried out between 1998-2000, and involved parents in a South Africa gold mining community, revealed evidence of positive behaviour changes, but these were not substantial or universal. The study also showed high levels of awareness and knowledge of HIV/AIDS but low condom usage, suggesting limited behavioural change with an increase in prevalence of curable sexually transmitted infections. It appears that despite the high level of knowledge and awareness of HIV/AIDS demonstrated by the miners and people of the community, that the level of risky sexual behaviour was high. These observations resonate with recent reports from UNAIDS (2007) that in spite of the high levels of awareness among parents in South Africa there are still high levels of risky sexual behaviour. However the use of a cross sectional survey instead of a longitudinal study design does not allow observation of causal relationships between different potential predictor and outcome factors.

Nevertheless, Williams et al (2003) used questionnaires to gather information at two different points in time (1998-2000) perhaps to get round the huge costs of conducting the more ideal longitudinal studies (Newell and Burnand, 2003). Furthermore the authors do not explain how samples used for the studies were obtained, this could affect the external validity of the study results (Newell and Burnand, 2003).

Overall, the results from the William et al (2003) studies imply that policy, practice and research efforts should seek to identify and address factors behind discordance between knowledge and behaviour change among parents.

We will now consider awareness /knowledge studies carried out on pregnant women.

2.3.4: Awareness/ knowledge among pregnant women

It has been observed that pregnant women in Southern Africa have a poor knowledge of HIV/AIDS in respect to mother to child transmission (UNAIDS, 2007). Mapule and Jail (2008), in their study carried out in South Africa looking at "Pregnant women's knowledge about mother-to child transmission (MTCT) of HIV infection through breast feeding", found that there is a high level of awareness of HIV/AIDS but a low level of knowledge of Mother to Child Transmission of HIV infection. This it can be argued, calls for a revised health education programme for the maternal and child health field.

Mapule and Jail (2008) used a descriptive research survey amongst a convenient sample of 100 pregnant women, during visits to the antenatal clinics; it has been argued that systematic errors easily occur with such designs (Nueman, 2008). This thus decreases the external validity of the research carried out by Mapule and Jail (2008).

Overall, the results of the studies among teenagers revealed variable knowledge/awareness about HIV/AIDS and practice of risky sexual behaviour; while studies among pregnant women revealed high levels of awareness about HIV/AIDS, but low levels of awareness about mother to child transmission. These results therefore, present the need for targeted programmes to improve risky sexual behaviours and knowledge of mother to child transmission.

2.4: EASTERN REGION OF SUB SAHARAN AFRICA

2.4.1: Overview

The East Africa region comprises Kenya, Uganda, Ethiopia, Somalia, Eritrea and Tanzania. In some of these countries, a decline in the prevalence of HIV/AIDS has been observed (UNAIDS 2007). The observed decline may have been due to behavioural changes and the death of people infected with HIV/AIDS in preceding

years (UNAIDS, 2007). The following sections presents relevant studies carried out on teenagers 16-19 years of age in East Africa.

2.4.2: Awareness/knowledge among teenagers (16-19 years)

Wouhabe (2007) looked at Sexual behaviour, knowledge and awareness of related reproductive health issues among single youth in Ethiopia, involved 4878 youth aged 15-24 years, and showed a reduction in sexual activity as compared to other countries but high levels of sexual activity among youths. Reasons for the decline in HIV/AIDS prevalence are not apparent but this may be due to deaths among those infected by HIV, as well as weak recording systems for epidemiological data.
The author suggests that the decline in the HIV/AIDS prevalence level might not necessarily be because of a change in sexual behaviour but might be because of death as recorded by UNAIDS (2007).

Although a lot of research has been carried out on HIV/AIDS in the East African region particularly in Uganda and Tanzania, no recent work has been carried out on HIV/AIDS among parents and pregnant women. Thus, revealing areas of potential research that will ultimately narrow the gap in knowledge in these areas and finally add to the pool of knowledge.

2.5: WEST AND CENTRAL REGIONS OF SUB SAHARAN AFRICA

2.5.1: Overview

The West African region comprises Nigeria, Senegal, Liberia, Burkina Faso, Ghana, Benin, Ivory Coast, Mali, and Togo; while Central Africa comprises Cameroon, Central African Republic, Chad, Democratic Republic of Congo, Equatorial Guinea, Gabon, Republic of Congo and Sao Tome and Principe. In West and Central Africa HIV/AIDS prevalence has been relatively stable with cases of actual decline described (UNAIDS, 2007). For example, in Nigeria, the prevalence of HIV/AIDS has declined from 5.0 to 4.4 (UNAIDS, 2007). This decline might be due to increased awareness of HIV/AIDS. Studies have been carried out in Nigeria to explore

awareness among teenagers and pregnant women in response to the rising spread of HIV/AIDS that was noticed over the period 1999-2001 (FMH, 2005). However, there have been no recent studies carried out among parents.

2.5.2: Awareness/knowledge among teenagers (16-19 years)

Research by Onah et al (2004) on HIV/AIDS awareness and sexual practices among undergraduates in Enugu, Nigeria showed high levels of knowledge of HIV/AIDS and a tendency of involving in risky sexual behaviours was high despite the high knowledge of the disease. The authors concluded that here is no correlation between the level of risky sexual behaviour and knowledge of the disease. Odunsanya et al (2004) did similar research among students of a school of community health in Lagos, Nigeria and observed a progressive increase of knowledge of the disease from the lower to the higher classes and in risky sexual behaviour among students. Ogbuji (2005) looked at knowledge of HIV/AIDS and sexual practise among Ibadan students and found that teenagers may have a high knowledge of the disease but not practise what they know. Acknowledging the observation by Ogbuji (2005), Ike and Aniebue (2007) argued that appropriate information; education and communication strategies must be packaged and targeted towards students, with efforts made to reinforce their positive trends, thus reducing risky sexual behaviour.

Evidence from the foregoing studies suggests that adequate information and knowledge about HIV/AIDS on its own is not enough to stop people from engaging in high risky behaviours. Nevertheless, emphasising the dangers will go a long way in preventing people from engaging in risky sexual behaviours. What is needed is research to determine factors that inhibit translation of knowledge into behaviour change so that these can be incorporated into policies and programmes and practice to tackle the spread of HIV/AIDS.

Momoh et al (2006) looked at levels of awareness among Nigerian female undergraduates, and showed a high level of awareness among the students with the awareness level increasing proportionally with the class level of the students. A

similar study by Momoh et al (2007) which included males showed moderate levels of awareness among the students of both sexes with girls being more likely to engage in high-risk sexual behaviour because of economic vulnerability. This tendency to engage in risk sexual behaviour among female students could be linked to high levels of poverty acknowledged by the UNDP (2006) where most Nigerians live on less than 1 dollar a day.

HIV/AIDS awareness studies have also been carried out in parts of the Niger delta. Oyo-ita et al (2006) carried out a study in Calabar looking at knowledge of HIV/AIDS among 600 secondary school adolescents from 3 different schools and found that specific knowledge of HIV/AIDS is poor and more work has to be put in place to increase the knowledge among students about main causes of the disease. Similar awareness studies were carried out by Ibe (2005), involving new students in tertiary institutions in Rivers state; this study showed an increased level of awareness as compared to the one carried out by Oyo-Ita et al (2005). Differences in the levels of awareness observed in these studies might be due to difference in educational level or other factors in the social, economic, or educational environment in these parts of the region.

2.5.3: Awareness/knowledge among pregnant women

Igwegbe and Ilika (2005) in their study among pregnant women attending antenatal clinic at a University Teaching Hospital looked at knowledge and perceptions of HIV/AIDS and mother to child transmission, and found a high level of awareness on HIV/AIDS but poor knowledge of Mother to Child transmission of HIV/AIDS. They went on to recommend that enlightenment programmes be targeted at health professionals and pregnant women about mother to child transmission of HIV/AIDS.

The findings from Igwegbe and Ilika (2005) are in line with the statement given by Avert (2006) (an international charity organisation on HIV/AIDS) that there is an alarming increase rate of mother to child transmission of HIV/AIDS in Nigeria. This gives further justification for the implementation of the recommendation given by Igwegbe and Ilika (2005).

Examination of the study carried out by Igwegbe and Ilika (2005) in Nigeria, in relation to the study carried out by Mapule and Jail (2008) in South Africa involving the pregnant women and their knowledge of mother to child transmission of HIV/AIDS, it is apparent that there were similar levels of awareness in these two countries about HIV/AIDS. However, study methods differed among these studies making comparisons of results limited possibly due to systematic bias from sampling (Neuman, 2006). Nevertheless, research by Igwegbe and Ilika (2005) has more external validity than the research work carried out by Mapule and Jail (2008), and hence produced results that are more robus.

In summary several studies have been carried out in Central and West africa and of the review works carried out in these two regions have reviewed a high level of knowledge/awareness of HIV/AIDS among the, teenagers and pregnant women. However a poor knowledge of Knowledge of mother to child transmission of HIV/AIDS was noticed among pregnant women. Despite the high level of awareness of HIV/AIDS shown by the pregnant women, the knowledge of Mother to Child transmission of the disease (HIV/AIDS) among pregnant women is low. Also little or no recent studies have been carried out on parents in this region, thus calling for research in this area in order to reduce the gap in knowledge noticed.

2.6: SUMMARY OF ISSUES EMERGING FROM REVIEW OF LITERATURE

Having explored the literature presented in this work, the author came up with the following conclusions:

Research carried out in the Southern Africa region showed that teenagers between the ages of 16-19 years have a variable knowledge of HIV/AIDS; practice risky sexual behaviour; targeted intervention programmes could improve awareness and change sexual behaviour; parents had high levels of awareness but tended to be involved in risky sexual behaviour and that although pregnant mothers have high level of awareness concerning the disease HIV/AIDS, the level of knowledge about

mother to child transmission of the disease is low (Sibanda et al, 2002; Terry et al, 2006; Williams et al, 2003).

Research carried out among teenagers in the East African region particularly Ethiopia, revealed increased sexual activity among the youths, but a decline in HIV/AIDS prevalence in the country. This decline is possibly the result of weak recording of epidemiological data or due to deaths of people infected by HIV/AIDS in the preceding years as presented by UNAIDS (2007). In addition, no recent studies on HIV/AIDS awareness and risky sexual behaviour have been carried out on parents and pregnant women in the region. In fact, there was only one study, which involved teenagers; these findings present a gap in the pool of knowledge thus presenting the need for more research work in this area.

Research work carried out among teenagers in both Central and Western Africa, suggests that despite high level of awareness/knowledge of HIV/AIDS, there is a high tendency for people in the region to be involved in risky sexual behaviour (Onah et al, 2004; Odusanya et al, 2004; Ogbuji, 2005; Ike and Aniebue, 2007).

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However, the author identified some gaps in the course of this literature review as follows: inadequate available literature on level of awareness and risky sexual behaviour being carried out from 2003-2008; inadequate exploratory studies on awareness and risky sexual behaviour as regards HIV/AIDS; absence of studies comparing awareness within and between countries from 2003-2008. In view of these obvious gaps the research work carried out by the author, whose results are reported in this dissertation, explores for the first time in Nigeria an area of HIV/AIDS awareness that uses a comparative study approach to knowledge/awareness and level of risky sexual behaviour among people from Niger Delta and Abuja in Nigeria. Results from the research work will add to information about awareness /knowledge and sexual risk behaviour among people from different parts of Nigeria, which will help policy makers and service providers to render appropriate interventions against HIV/AIDS in the region and country at large.

CHAPTER THREE: METHODOLOGY/STUDY DESIGN

3.1: OVERVIEW

This chapter covers a review of the study design used for this work and the strengths, weaknesses and applicability of quantitative and qualitative research approach. The chapter also covers selection of research methods used from among the different methodology focusing on the rationale of using the survey methods, , the advantages and disadvantages of the survey method and how to mitigate this disadvantages, the questionnaire design, self reporting and how to mitigate it, data collecting tool, data collection procedure, data analysis.

3.2: APPROACHES TO RESEARCH AND STUDY DESIGN

Research design refers to the overall composition of the research to be carried out. (Newell and Barnard, 2006). The main purpose of the design is to help turn research work into a plan that will to answer the research question (Silverman 1997). In order to answer the research question, the Author noted that it is expedient to first identify and define what the research problem is and to then formulate an appropriate, answerable and explicit question from this definition (Silverman 1997).

3.2.1: Problem statement

The Prevalence of risky sexual activities and the continuous increase and spread of HIV/AIDS coupled with the fact that the disease (HIV/AIDS) has no cure makes HIV/AIDS a major health threat to the Nigerian populations' and mankind in general. The implication of not preventing HIV/AIDS spread cannot therefore be over emphasized. To fight the spread of HIV/AIDS all people who are at risk of contracting the disease must be aware of the disease. Given the foregoing, it can be asked thus: Do people from the Niger delta region have a high level of awareness /knowledge about HIV/AIDS when compared to people from ABUJA? It can also be asked

whether people from the Niger delta region are involved in high risk sexual behaviour compared to people from Abuja?

Overall, this research generates importance baseline data that can be used to promote, prevent and protect the health and development of the indigenes of the Niger delta people, Abuja and Nigeria as a whole with regards reducing the spread of HIV/AIDS.

3.2.2: Research approach

The two main types of research approaches are qualitative and quantitative approaches. Newell and Burnand (2006) describe qualitative research in terms of inductive reasoning and quantitative research in terms of deductive reasoning.

According to Newell and Burnand(2006) qualitative approaches are linked to the idea of theory building where a situation or a challenge of interest has little or no information to which theory can be linked or which can be linked to theory. Qualitative methods are better suited in the early part of the research question this is because much of work is exploratory and it examines individual cases in great detail (Newell and Burnard, 2006). Qualitative methods are most suitable in handling personal experiences in detail this is because the approach allows researchers to work in depth with a few respondents thus generating detailed account of their experiences. (Newell and Burnard, 2006).

In view of the foregoing it is clear that qualitative approach could have been used for carrying out the research reported in this dissertation. However the aims of this research was not to gain in- depth knowledge and understanding but rather to survey views on subjects that have been explored previously.

Quantitative approaches, by contrast are commonly and appropriately used when enough information is available (Newell and Burnard, 2006). These approaches attempt to tease out cause –effect relationships and establish extrapolative models associated with well known theories often allowing the evaluation of the worth of competing models and theories. (Newell and Burnard 2006). Qualitative approaches

pay more attention to generalisation of results to large populations where deductions are made about experience of large population from samples (Newell and Burnard, 2006). Polit and Beck (2006) added that the aim of the quantitative approach is to have power over extraneous variable, hence enhancing the reliability and validity of the study result.

Qualitative approaches include use of surveys, longitudinal follow up type and experimental study designs (Newell and Burnand, 2006).

Surveys are important and useful because they give a broad brush picture of groups of people's experiences, rather than those of individuals at a given point in time or place. (Newell and Burnard, 2006).

Surveys are conducted using strict sampling protocols and standard scope procedures.(Newell and Burnard 2006).

In view of the fore going it is clear that quantitative methods would be suitable for answering the research question for this study. In particular, the survey method was deemed most appropriate given efficiency considerations of time, location/place and resources.

3.3: RESEARCH METHODOLOGIES

Methodology refers to the system of methods and rules which facilitate the collection and analysis of data (Hart 1998). A range of methodologies exists; naturalistic, experimental and survey; each have its own advantages and disadvantages for a given research question, researcher and research project. (Newell and Burnard, 2006).

The nationalistic methodologies such as phenomenology, grounded theory and action research allow for descriptive research to take place in a natural and undisturbed setting where process of research help facilitate a less obstructive research experience for participants. (Bowling, 2002). For the purpose of this research the naturalistic methodologies were deemed not be suitable or feasible for this research because of the sensitive nature and impossibility of observing risky sexual behaviours without disturbing or affecting study subjects.

Newell and Burnard (2006) describe experimental methodologies as involving three elements: manipulation of the independent variable; use of control group and random allocation to experimental conditions. These three elements allow experiments to claim a high degree of internal validity. Rees (1997) added that experimental methodology aims to provide evidence on the existence of cause and effect relationship between independent (the cause), and the dependent (the effect). Newell and Burnard (2006) also state that the experimental research involves comparison of variations between the independent and the dependent variable while reducing the effect of bias on observed relationship between the independent and dependent variables. This greater control of possible biases, increases confidence in asserting a cause and effect relationship. Since this research reported here was not designed to evaluate the cause and effect relationship between two or more variables but rather possible associations experimental methodology was not deemed appropriate.

For the purpose of this research and in order to evaluate the level of awareness/knowledge and level of sexual risk behaviour in responds to HIV/AIDS the survey methodology was utilised. A survey can be defined as a set of scientific procedures for collecting information and making quantitative inferences about populations (Neuman 2006). The survey method can be used for different research question. According to the Neuman (2006), though the categories overlap, the survey method can be used in looking at

The way subjects carries out or handle things or information, behaviour, peoples views towards an action or a thing that has taken place (Attitudes, beliefs and opinions) and desired expectation or evaluating the desired knowledge on a subject(characteristics, expectation, self classification and knowledge). The following advantages of using surveys informed the choice of method for the research reported here.

- It is inexpensive

- It is the only method of observation that can be used in describing the characteristics of a large population.
- It can be used in analysing large samples.
- It can be used in analysing questions asked about a given topic given considerable flexibility to the analysis.
- It is very flexible at the creation phase in deciding how the questions will be administered: as face-to-face interviews, by telephone, as group administered written or oral survey, or by electronic means.
- Standardized questions make measurement more precise by enforcing uniform definitions upon the participants.
- Standardization ensures that similar data can be collected from groups then interpreted comparatively (between-group study), and;
- It has reliability by presenting easy to obtain by presenting all subjects with a standardised stimulus therefore eliminating observer subjectivity(Newman 2006).

According to Neuman (2006) disadvantages of using the survey method include:

- There is a tendency when constructing the questionnaires to miss out some main facts that are important to respondents,
- A large number of subjects whose reply is needed to have adequate data,
- Participants might not be able to recall information and might find it hard to tell the truth in sensitive issues.

To mitigate potential disadvantages of using survey methodology in this research, the following strategies/steps were adopted:

- Careful construction of the questionnaires to ensure that a wide option was available and use of open ended questions where necessary (Neuman, 2006)
- Use of face to face method of self administered questionnaires and ensuring that the respondents return the questionnaires immediately after use.

- Ensuring that only questions that had to do with recent events were asked, and using a coding process in place of names to ensure confidentiality of the respondents.

A number of techniques can be used to obtain data; these include use of self – administered questionnaires, interviews and structured observations.(Newell and Burnard, 2006).

The self administered questionnaire was used for this research work. The self administered questionnaire is an instrument used in collecting information from people who answer question and complete the instruments themselves.(Burden 2005). The self administered questionnaire can be administered using pen- and – paper technique or on computers (Burden 2005). In this work, the pen-paper technique was employed because the target population and respondents did not have access to computer.

According to Bourque and Fielder (1999) describe two main types of self administered questionnaire, the self supervised administration (one to one, group, and semi supervised) and the unsupervised administration. In the former (self administered questionnaire) respondents are in direct contact with the surveyor and the surveyor is available to answer question that may arise from the questionnaire. In the later the surveyor is not in direct one to one contact with respondents. The one to one supervised administration was used by the author to try and standardise administration. The Main disadvantages associated with the one to one interview are higher cost, potential for researchers' bias and potential of breach of confidentiality (Bourque and Fielder, 1999).

Self administered questionnaire has some advantages over other methods, these include cost effectiveness, and ease of implementation, gives respondents adequate time to answer questions, handling sensitive topics such as sex and HIV/AIDS.

The self administered questionnaire has disadvantages that are related to sampling (Availability of lists, response rates, literacy and language), questionnaire construction and administration (Bourdue and Fielder, 1999).

According to Stone (1999), the problems associated with self reporting must be observed and where possible, curtailed. One possible reason behind respondents giving insincere answers is that people tend to give answers that are ethically correct or that they think the researcher wants to hear. These potential problems were overcome by providing an explanation about the purpose of the study and the benefits that would be derived from the study. Having talked about the methodology the Author now looks at the Study sample.

3.4: STUDY SAMPLE

Convenient sample of the local pharmacy shop populations were selected for practical and cost reasons. Ideally sampling seeks to ensure results from study can be generalised to the larger population (Picciano, 2003).However for this research such ideas were beyond the scope of study aims and practicalities.

Two samples of 100 subjects each were selected from the Niger delta region and from the federal Capital Territory. No formal sample size and power calculations (Bowling, 2002).It has been suggested that for a comparative study at least 100 subjects in each will provide reasonable power to detect differences (Bryman, 2002).

The Niger delta people are over 32 million people and the population of the federal capital territory is over 1.4 million people (National Bureau of statistics, 2006).
This research focused on the males and females within 16- 40 years age group because of the following reasons:

- They are the sexually active group
- They are old enough to understand issues relating to HIV/AIDS
- Males in this group may be involve in purchase of casual sex
- Females in this group may be unable to negotiate safe sex because of fear of their husband or the economic power wielded by men willing to pay for unsafe sex.

Inclusion and Exclusion criteria

To carry out a research with few or minimal selection bias it is expedient that the inclusion and exclusion criteria be clearly defined before the start of the study (Ajetunmobi 2002).

Participants in this research work were men/women between 16-40 years of age of core indigenes of Niger delta region of the country and those residing at the federal capital territory Abuja. Those that did not meet the inclusion criteria were excluded from the research work. Having looked at the study sample the researcher now looks at data collection.

3.5: DATA COLLECTION TOOL

Data collection in any research is guided by reasons behind the research work, expected benefits to be derived from the information given and from characteristics of people from whom will this information come from.(Newell and Burnard, 2006). This research was focused on obtaining information about the level of knowledge/awareness among people from Niger delta and Abuja regions with regards HIV/AIDS and risky sexual behaviour.

For data collection, the main tool that was used in this research was a self administered question.

In developing the questionnaire a careful consideration was given to different themes from publish and unpublished works on HIV/AIDS.

This questionnaire was then set in a logical order starting with the easier questions and then gradually progressing to the harder/more sensitive questions. This was done to ensure that participants were able to relax easily and be more likely to complete it till the end paying more attention to the structure of the questionnaire. This professional style of questionnaire construction/arrangement according to Bowling, (2002) will increase response rate and improve quality of responses.

The questionnaire covered the following data themes:

Demographics

- Age
- Sex

- Educational level
- Marital Status

Awareness Level

- Sources of Information on HIV/AIDS
- Ever heard of HIV/AIDS

Knowledge of HIV/AIDS

- Knowledge How HIV/AIDS can be prevented
- Who is Most likely to have HIV/AIDS
- Knowledge of the Virus that causes AIDS
- Knowledge of Mother to Child transmission
- Knowledge of sexually transmitted infection increasing chances of contracting HIV/AIDS.
- Knowledge of places where condoms can be obtained.

Risky sexual Behaviour

- Have you ever talked of HIV/AIDS with your spouse or Regular Sex partner
- How many sexual Partners have you
- Do you use condom with all of them

A self completed questionnaire was developed for data collection in this research work, in order to carry out the research work, this was preferred to the face to face interview or other method of survey research because the data will be process with reduce less chances of observer bias, participants in the research can give their honest view and less chance of the researchers influencing their honest view through the process of recording (Ajetunmobi 2002:86). The self completed questionnaire method is preferable to ensure compliance and confidentiality because respondents /participants name are not needed and there is no provision for it (Robert et al 2006). This was of utmost importance because of the sensitive nature of the issue that is handled.

Preparing of questionnaire was guided by principles stipulated by Robert et al (2006). These principles include:

- Ensuring that each question is specific
- Including broad response alternatives in each question
- Ensuring that the least socially desirable alternatives took the first or starting position in responses options to questions.
- For sensitive questions an open ended question design was used where possible
- Using open ended questions sparingly
- Avoiding Double barrelled question
- Limiting rating categories to not more than five points

The fore going principles help ensure clarity of questions and increase chances that participants understands each question without aid from the researcher. Furthermore the principles help reduce chances of participants giving misleading answers to difficult questions. (Neuman, 2003). A copy of this questionnaire used for this research work can be seen in appendix III

A pilot study using the self administered questionnaire was carried out among other clients visiting the two pharmacies in order to identify possible problems that may arise during the administration of the questionnaire and also reduce vagueness, uncertainty or doubt (Bell, 2005).

The questionnaire contains a mixture of approach using both open and closed ended questions which help in order to blend the information during analysis. This combination method is very necessary as it combines the different methods. The Open ended questions (unstructured, free response) ask questions without giving the respondents any fixe answer to choose from whereas the close ended question asked question at the same time gives the respondents free answers to choose from. The open and closed ended questions have some advantages and disadvantages. According to Neuman (2006), the advantages of the open-ended questions are as follows:

- It allows an unrestricted amount of potential response. This Author says is necessary in order to allow respondents will to express their selves,
- Respondents can answer in detail and can meet the requirements and clarify responses,
- Unforeseen answer can be revealed. Thus giving way for a new body of knowledge,
- They allow plenty answers to compound issues,
- It allows inventiveness, self expression and wealth of detail,
- They disclose a respondent's logic, thinking process and a border of reference.

According to Neuman (2006), the disadvantages of an open-ended question are as follows

- Different respondents give different degree of detail in answer,
- Some answer by respondents may be unrelated or hidden in worthless detail,
- Coding responses is difficult,
- Respondents may get frightened by questions,

The researcher mitigated these disadvantages by using open-ended question sparingly and closed ended question more often. Having looked at the open-ended questions including the advantages and disadvantages and how to mitigate these disadvantages, the researcher now looks at the advantages and disadvantages of the closed-ended question.

According to Neuman (2006) the advantages of the closed ended question are as follows:

- It is easier and quicker for respondents to answer
- The answers of different respondents are easier to compare
- Answers are easier to code and statically analysis become very easy
- The Author noted that replication of the work is easier to be carried out.

The disadvantages of closed ended question are as follows:

- They can suggest ideas that respondent that the respondents would not otherwise have

- They force people to make choices they would not make in the real world
- The researcher observed that clerical mistakes or marking the wrong response is possible by the respondents.

Having observed the following disadvantages the researcher mitigated them by using open-ended question where it was necessary.

Study questionnaires were distributed to participants by the author in partnership with another pharmaceutical colleague. The pharmaceutical colleague was trained on the procedures for distributing and collection of completed questionnaires by the author prior to commencing the research. The two met again half way and at the end of the research to discuss and reflect on how the process was progressing and to agree on solutions to problems that emerged.

Study participants were provided with a cover sheet explaining the reason for the research and seeking the consent from the participants. A copy of the explanatory sheet can be found in appendix I.

3.6: DATA ANALYSIS METHODOLOGY

Data analysis is a very important aspect of quantitative research and implies making the right choice of analytical tools for use. In choosing the right analytical tool the researcher sought for professional advice and guidance from statisticians in the school of health at the University of Bedfordshire. After careful consultation and reading the Author, decided to make use of the most Excel soft ware package, since the data to be analysed was not so complex and the Author is familiar with it. In order for the researcher to use quantitative data to test to test for hypothesis, the data need to be converted or put in a different form that the computer can understand, that is a method that is machine readable(Neuman, 2006). The researcher uses a coding procedure and a code book to help in the analysis. The researcher also ensured that the coding process was recorded in the coding book and multiples copies of the book were made. This was necessary in order prevent starting the coding process again if there is a list of the book.

3.7: DATA SAFE KEEPING

Data obtained for the research was kept in a safe cabinet that was kept and accessed by the researcher in Nigeria (University of Port Harcourt) and subsequently at the University of Bedfordshire.

3.8: ETHICAL CONSIDERATION AND CONSENT

Ethical considerations are an important area in research, this is necessary to ensure that the broad principles of beneficence and autonomy are followed in the design and conduct of the research (Newell and Burnand, 2006).

To conduct the research ethical approval was obtained from the University of Bedfordshire Ethical Committee. This was followed by an application made to the school ethical committee for approval in addition with a copy of my research proposal. After careful consideration of my application by the University of Bedfordshire, the much desired ethical approval was gotten from the University of Bedfordshire Ethical Committee in writing. This is found in appendix I.

For any research that will be conducted involving human beings, the researchers must get approval from an ethical committee (Newell et al 2006).. The University of Port Harcourt Ethical Committee was approached initially for guidance from the committee vice chair regarding a checklist of requirement for ethical approval in the Niger delta region.

A formal application to the university of Port Harcourt ethical committee was made the by the Author to the secretary University of Port Harcourt Ethical Committee. Included in the application was a copy of the ethical approval given to researcher by the University of Bedfordshire Ethical Committee, a letter from my supervisor/coordinator of the masters of Public Health programme, a copy of my

research proposal. After careful consideration from the University of Port Harcourt Ethical Committee, the ethical approval was obtained by the Author a copy of which can be seen in (Appendix I)

3.8.1: Informed consent

A fundamental ethical principle of social research according to Neuman (2006) is: to never coerce anyone into participating in research hence participation must be voluntary. All participants were provided with an explanatory sheet covering what the research is all about and allowed to clarify any concern and misunderstanding before been asked for written consent to take part. It is accepted that it is not enough to get permission from people; they need to know what they are being asked to participate so that they can make an informed decision (Neuman, 2006).

The following guidelines were considered when writing the informed consent statement:

- A brief description of the purpose and procedure of the research.
- A guarantee of anonymity and confidentiality of records
- A statement of any risks or discomfort associated with participation
- A statement that participation is voluntarily and can be terminated any time without penalty (Neuman, 2006).

The above guidelines help the Author to explain what the research is all about to the participants and provide information to participants about their right not to take part in the study.

The researcher fully introduced themselves at the onset of each encounter with participants. This was necessary in order to help protect research participants from fraudulent research as well as protect legitimate researchers. (Neuman 2006). Informed consent is very important in research; because it lessens the chances of fraudulent people or researchers will defraud or abuse subjects. It also reduces the likelihood of the bogus use of researchers' identity to market products by obtaining information for personal advantage.

Having looked at the procedure involved in obtaining informed consent, the Arthur looks at the resources and time table for the research.

3.9: RESOURCES AND TIME TABLE

In order to run this research the Arthor has to put the financial cost of the research into consideration. To achieve this, the Arthor has to make a budget of all the day to day running of the research work. This was necessary in order to give the Author a clue of the financial cost of the research. And it will also help theAuthor to develop how to make research budget. The researcher's budget cover all stages of the research, some of which are data analysis, transportation to the research site and back, payment of co researchers, research development, implementation and dissemination of the result. This is shown in appendix IV. In the course of this research, the Author formulated a time plan for the research work. The time plan gives the period and duration of the research work. This was necessary to put the Author under check and help him work with the time frame. The time plan for the research work is shown in Appendix V.

In conclusion having explored the methodologies and research approaches, the author have decided to make use of the survey design method as the chosen research method for this work and the use of self administered questionnaire as the desired collection tool in this research work.

CHAPTER FOUR: RESULTS, DISCUSSION, RECOMMENDATIONS AND CONCLUSIONS

4.1: OVERVIEW

This chapter looks at the results from analyses of data obtained from the research work, followed by discussion of these results, then recommendations and conclusions based on findings from this research work.

4.2: RESULTS

4.2.1: Response rate and basic characteristics of participants

This section covers the response rate, demographic characteristics of the respondents, levels of awareness, knowledge about HIV/AIDS and risky sexual behaviour related to HIV/AIDS in the two sub-samples.

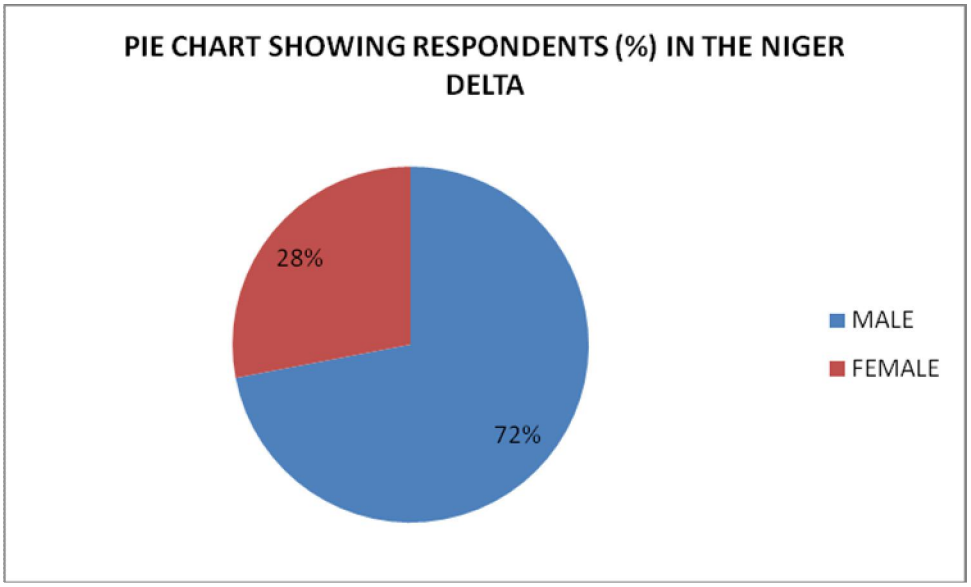
Response rate

A total of 200 participants (100 each from Niger Delta and Abuja respectively) completed and returned the study questionnaire. All people who were asked to take part in the study agreed and completed the study questionnaire.

Gender

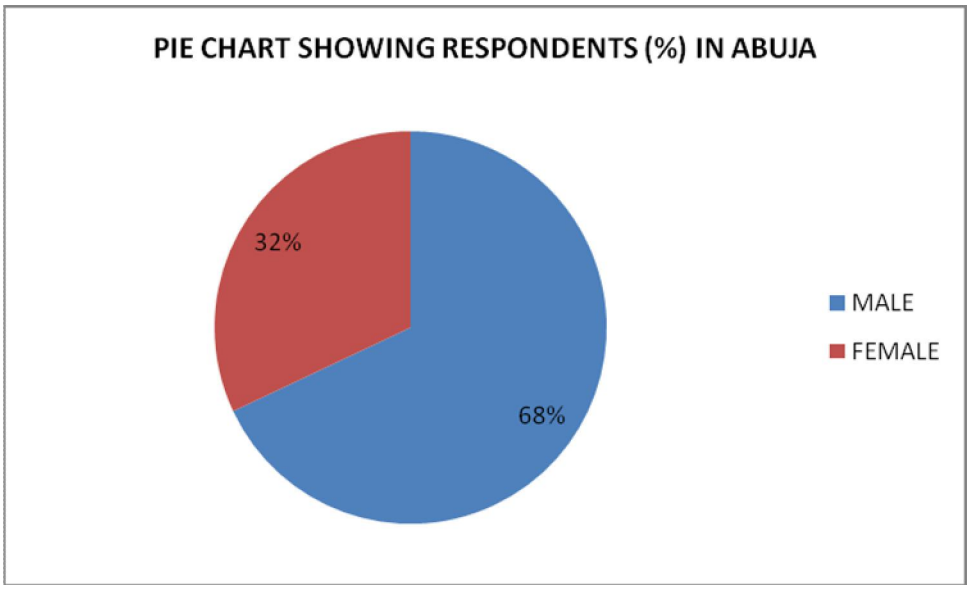
In the Niger delta sub-sample 72% (72/100) of the respondents were females while the remaining 28% were male; in the Abuja sub-sample 68% (68/100) of respondents were female and 32% were males. The distributions of study subjects by gender for the Niger Delta and Abuja sub-samples are shown in Figures 1 and 2 below.

Figure 1: Pie chart showing distribution of study participants by gender for the Niger Delta sub-sample



Overall, results in Figures 1 and 2 show that there were more male and less female participants in the Niger Delta sub-sample compared to the Abuja sub-sample.

Figure 2: Pie chart showing distribution of study participants by gender for the Abuja sub-sample



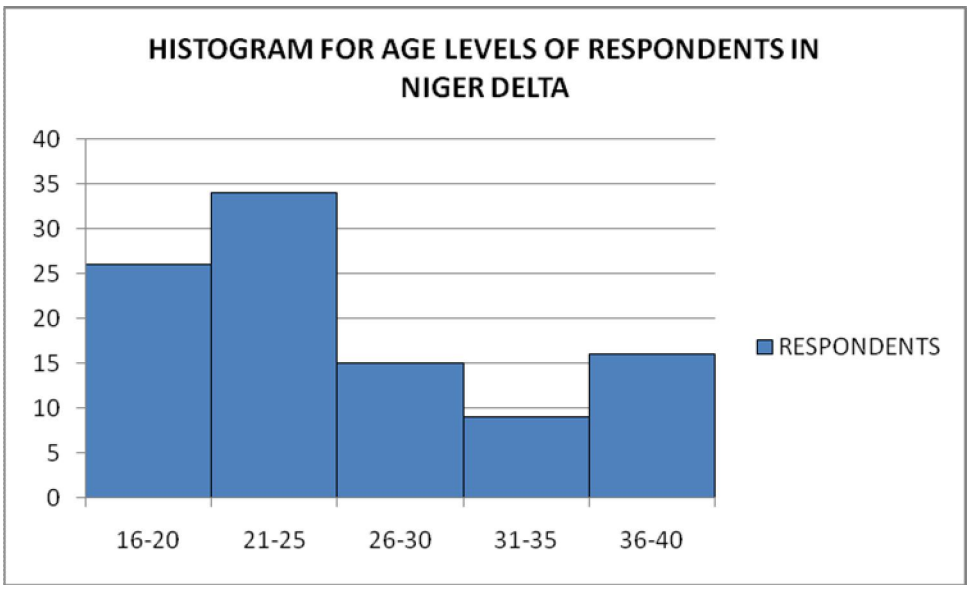
Age

All study participants were aged between 16 and 40 years of age in both the Abuja and the Niger delta sub-samples.

The distributions of study subjects by age group for the Niger Delta and Abuja sub-samples are shown in Figures 3 and 4 below.

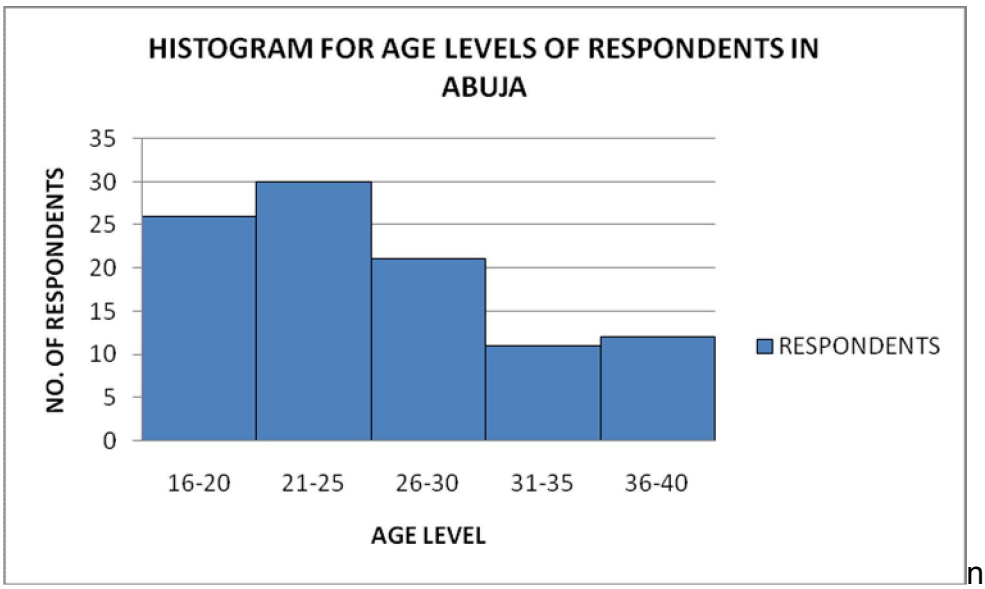
Results in Figure 3 show that 26% (26/100) of study participants in the Niger Delta sub-sample were aged 16-20 years, 34% (34/100) were aged 21-25 years, 15% (15/100) were aged 26-30, 9% (9/100) of the participants were within the age level of 31-35 years of age and 16% (16/100) were aged 36-40 years. The mean age of study participants in the Niger Delta sub-sample was 26 years.

Figure 3: Histogram showing distribution of study participants by age group for the Niger Delta sub-sample



Results in Figure 4 show that 26% (26/100) of participants in the Abuja sub-sample were aged 16-20 years, 30% (30/100) were aged 21-25 years, 21% (21/100) were aged 26-30 years, 11% (11/100) were aged 31-35 years and 12% (12/100) were aged 36-40 years. The mean age of study participants in the Abuja sub-sample was 26 years.

Figure 4: Histogram showing distribution of study participants by age group for the Abuja sub-sample



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Results presented in Figures 3 and 4 show that the distribution of study participants in the two sub-samples were similar for the 16 – 20 years age group. The results also show that there were more participants in the 21 – 25 and 36 – 40 year age groups for the Niger Delta sub-sample than the Abuja sub-sample and that there were fewer participants in the remaining age groups for the Niger Delta sub-sample compared to the Abuja sub-sample. Overall, however the age distributions of participants in both sub-samples were fairly similar.

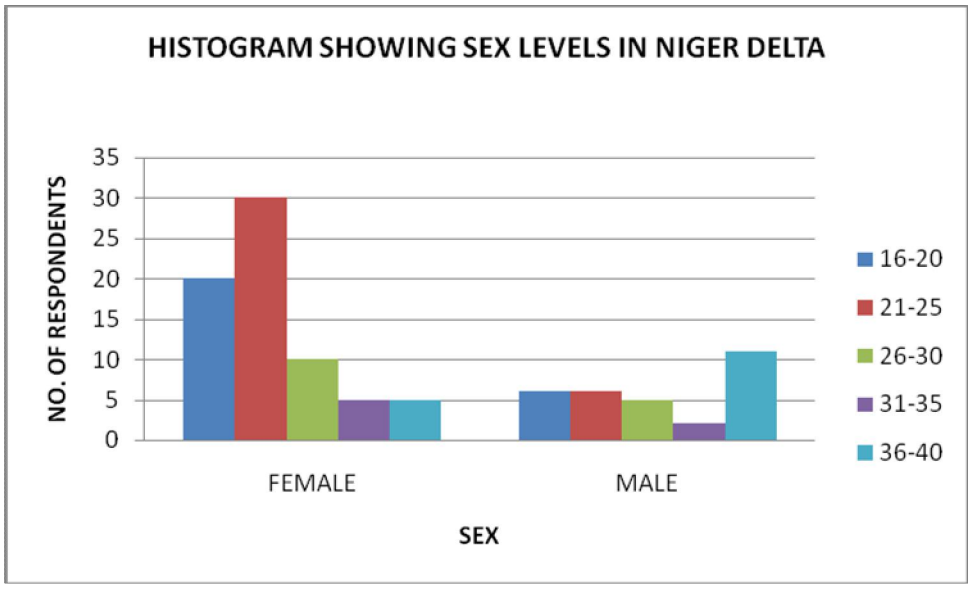
Gender and age group

The distributions of study subjects by gender and age group for the Niger Delta and Abuja sub-samples are shown in Figures 5 and 6 below.

Results in Figure 5 show that in the Niger Delta sub-sample the majority of female participants were in the 16 – 20 years and 21 – 25 years age groups (20 and 30 out of 70 respectively) and fewer in the older age groups. The results also who that there was a more balanced distribution of males across the different age groups with a peak of 11 (out of 30) among the 36 – 40 year olds. Overall the highest number of females was in the 21 – 25 years age group compare with the 36 – 40 years age group for males.

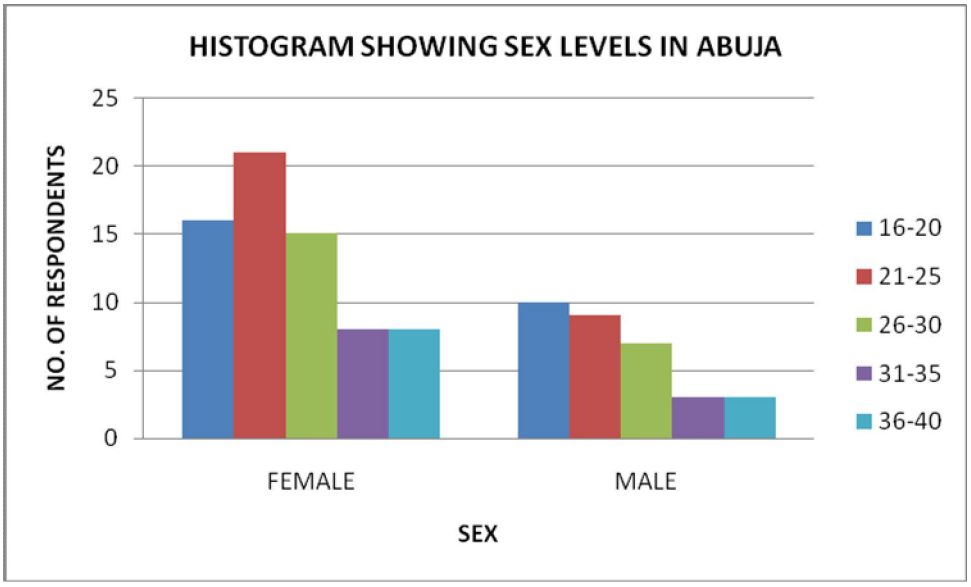
Results in Figure 6 show that in the Abuja sub-sample the majority of participants were in the 16 – 20 years and 21 – 25 years age groups for both sexes. The results also show that the highest proportion of female participants was in the 21 – 25 years age group and the 16 – 20 years age group for male participants.

Figure 5: Histogram showing distribution of study participants by gender and age group for the Niger Delta sub-sample



Overall, results in Figures 5 and 6 show that the majority of participants were in the older age groups for both sexes in the Niger Delta sub-sample compared to the Abuja sub-sample. The results also show that the age distribution for participants was similar for both sexes in the Abuja sub-sample compared to the Niger Delta sub-sample.

Figure 6: Histogram showing distribution of study participants by gender and age group for the Abuja sub-sample

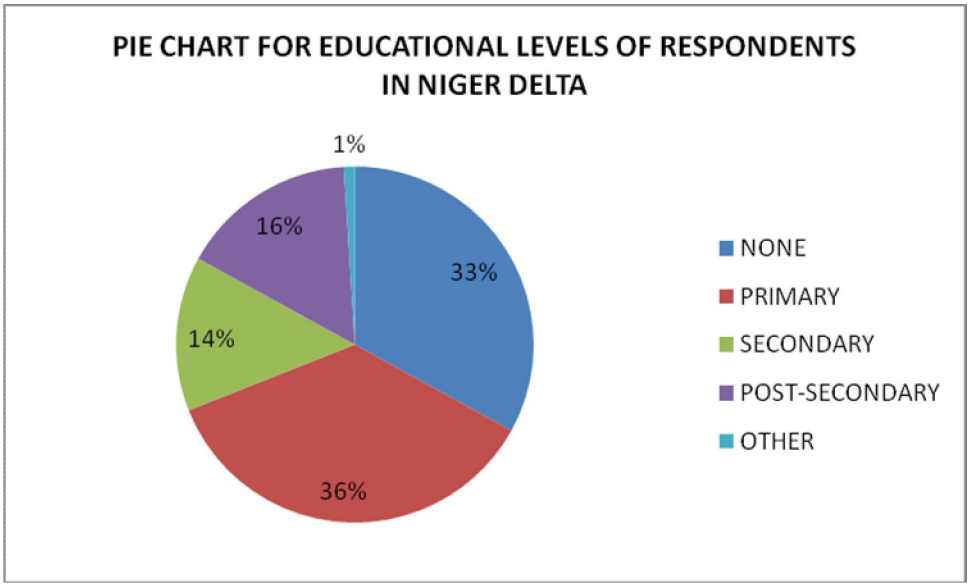


Educational level

The distributions of study subjects by educational level for the Niger Delta and Abuja sub-samples are shown in Figures 7 and 8 below.

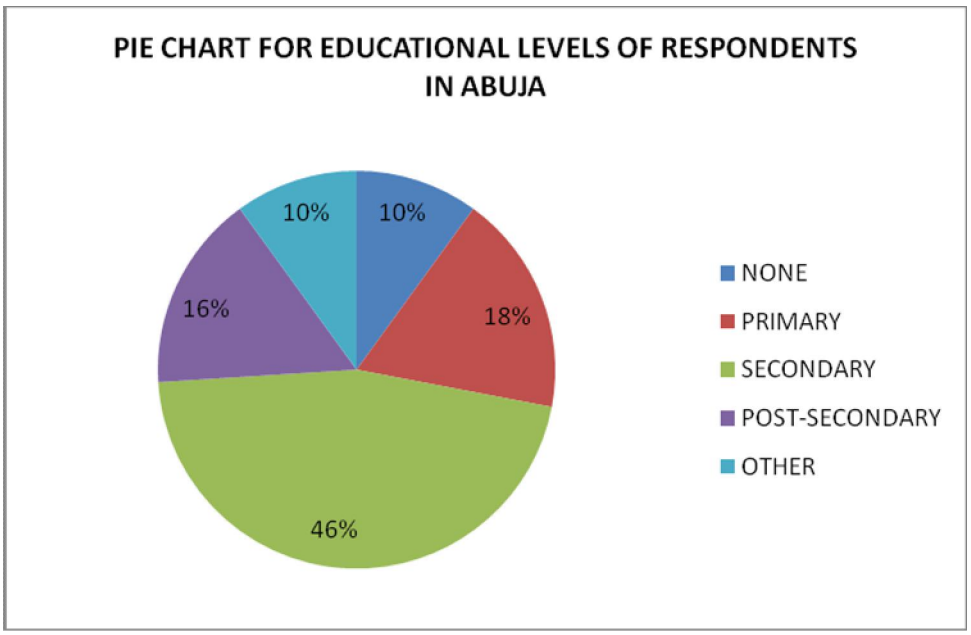
Results in Figure 7 show that a third of participants in the Niger Delta sub-sample had no formal education, more than a third had primary level education, 14% had secondary level education and 16% had post secondary level education.

Figure 7: Pie chart showing distribution of study participants by education level for the Niger Delta sub-sample



Results in Figure 8 show that a tenth of participants in the Abuja sub-sample had no formal education, nearly a fifth had primary level education, more than two fifths had secondary level education, 16% had post secondary level education and a tenth had tertiary level education.

Figure 8: Pie chart showing distribution of study participants by education level for the Abuja sub-sample



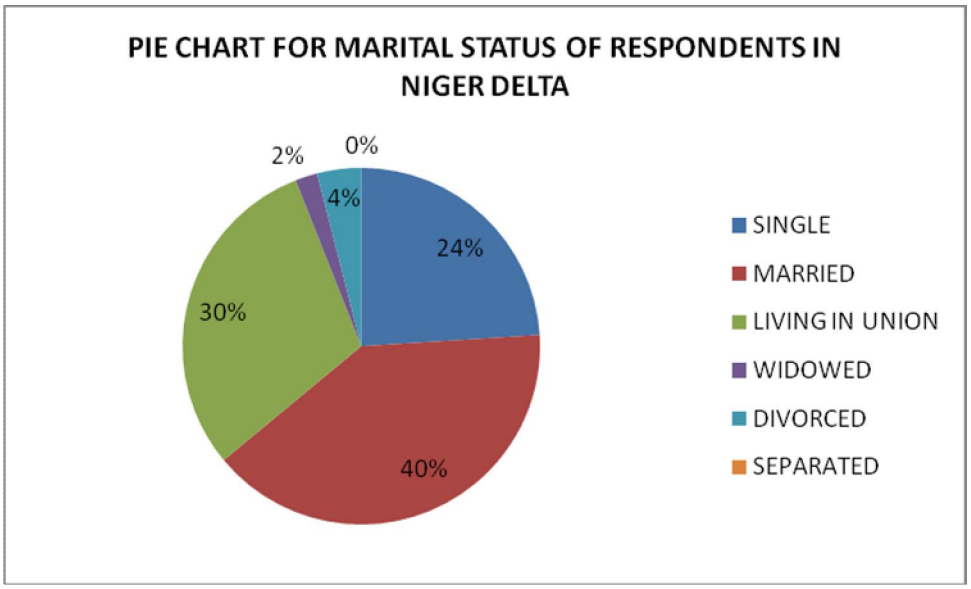
Overall, results in Figures 7 and 8 show that there were higher proportions of participants with no formal or primary level education in the Niger Delta sub-sample compared to the Abuja sub-sample. The results also show that there were lower proportions of participants with secondary, post secondary and tertiary level education in the Niger Delta sub-sample compared to the Abuja sub-sample.

Marital status

The distributions of study subjects by marital status for the Niger Delta and Abuja sub-samples are shown in Figures 9 and 10 below.

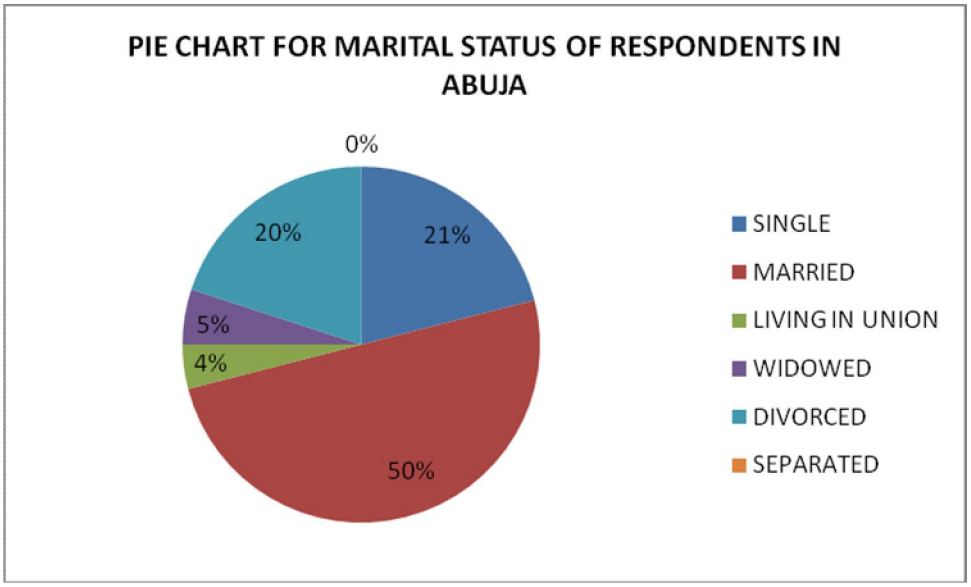
Results in Figure 9 show that nearly a quarter of participants in the Niger Delta sub-sample were single, 40% were married, 30% were living in union and only 4% were divorced.

Figure 9: Pie chart showing distribution of study participants by marital status for the Niger Delta sub-sample



Results in Figure 10 show that a fifth of participants in the Abuja sub-sample were single, 50% were married, only 4% were living in union and 20% were divorced.

Figure 10: Pie chart showing distribution of study participants by marital status for the Abuja sub-sample



Overall, results in Figures 9 and 10 shows that higher proportions of participants in the Niger Delta sub-sample were single or living in union compared with those from the Abuja sub-sample. The results also show that lower proportions of participants in the Niger Delta sub-sample were married, divorced or widowed compared with those from the Abuja sub-sample.

4.2.2: Level of awareness and sources of information about HIV/AIDS

General awareness about HIV/ AIDS

Results from analyses show that for both sub-samples, at least 95% of participants reported that they had heard about HIV/AIDS (95% for Niger Delta and 97% for the Abuja sub-samples respectively). These results show that overall similar proportions of participants reported having heard about HIV/ AIDS in both sub-samples.

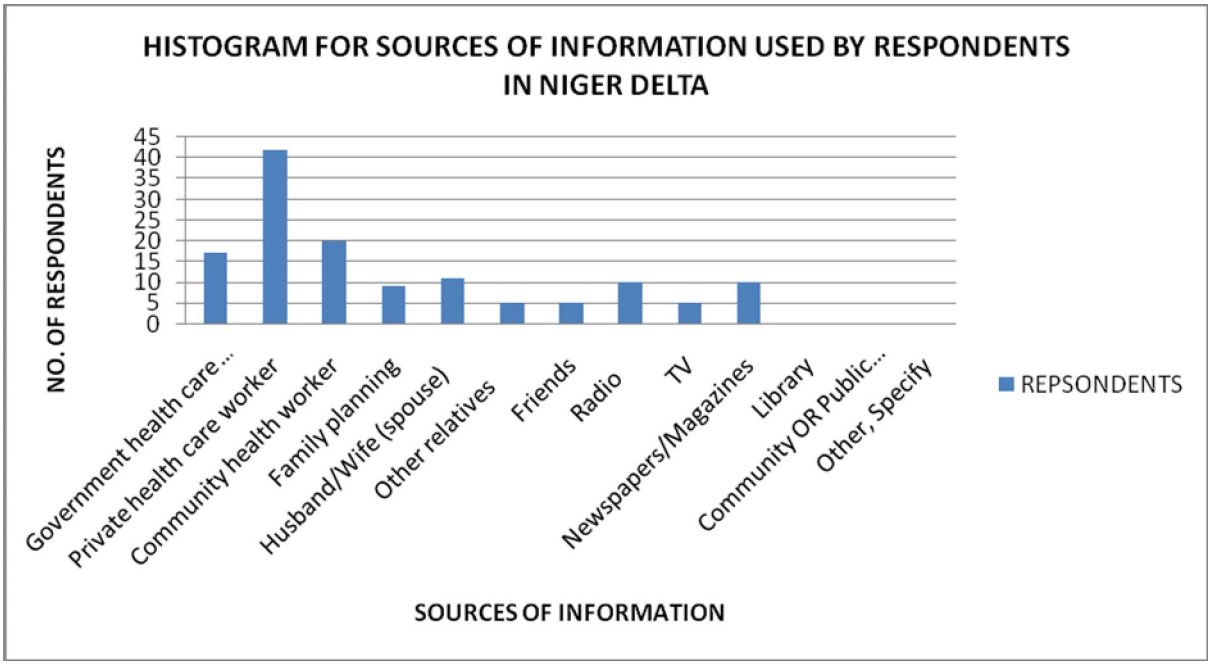
Results from analyses further showed that 95% or more of participants in both sub-samples indicated that they knew what to do to avoid contracting HIV/ AIDS, while 90% of participants in both sub-samples indicated that they knew that HIV caused AIDS.

Awareness about sources of information on HIV/AIDS

The distributions of study subjects' responses according to source of information about HIV/ AIDS for the Niger Delta and Abuja sub-samples are shown in Figures 11 and 12 below.

Results in Figure 11 show that 13% of participants in the Niger Delta sub-sample reported they had acquired information about HIV/ AIDS from government health care worker, 31% from private health care workers, 15% from community health workers, 7% each from family planning clinics, radio and newspapers; 8% from their spouse and less than 5% each from other relatives, friends and television. The results also show that none of the participants reported that they had obtained information from a library.

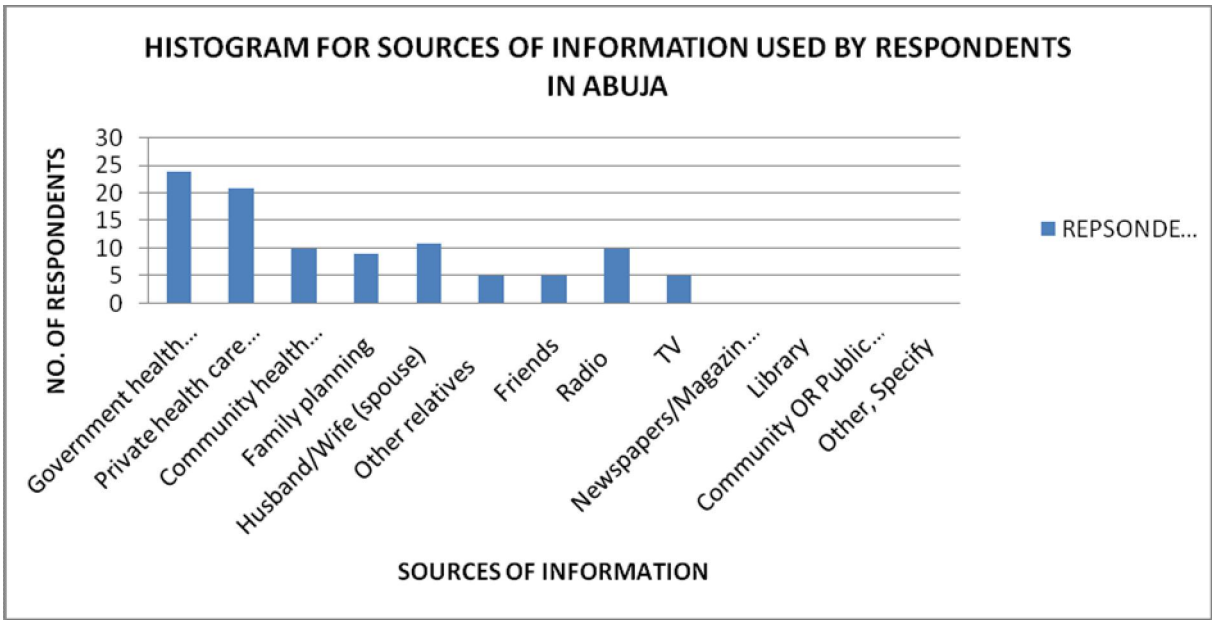
Figure 11: Histogram showing distribution of study participant responses by source of information about HIV/ AIDS for the Niger Delta sub-sample



Results in Figure 12 show that nearly a quarter of participants in the Abuja sub-sample reported they had acquired information about HIV/ AIDS from government health care worker, a further fifth from private health care workers, about a tenth

each from community health workers, family planning clinics, their spouse, and radio. The results further show that 5% of participants reported that they had acquired information about HIV/ AIDS from other relatives, friends and television respectively. The results also show that none of the participants reported that they had obtained information from a library.

Figure 12: Histogram showing distribution of study participant responses by source of information about HIV/ AIDS for the Abuja sub-sample



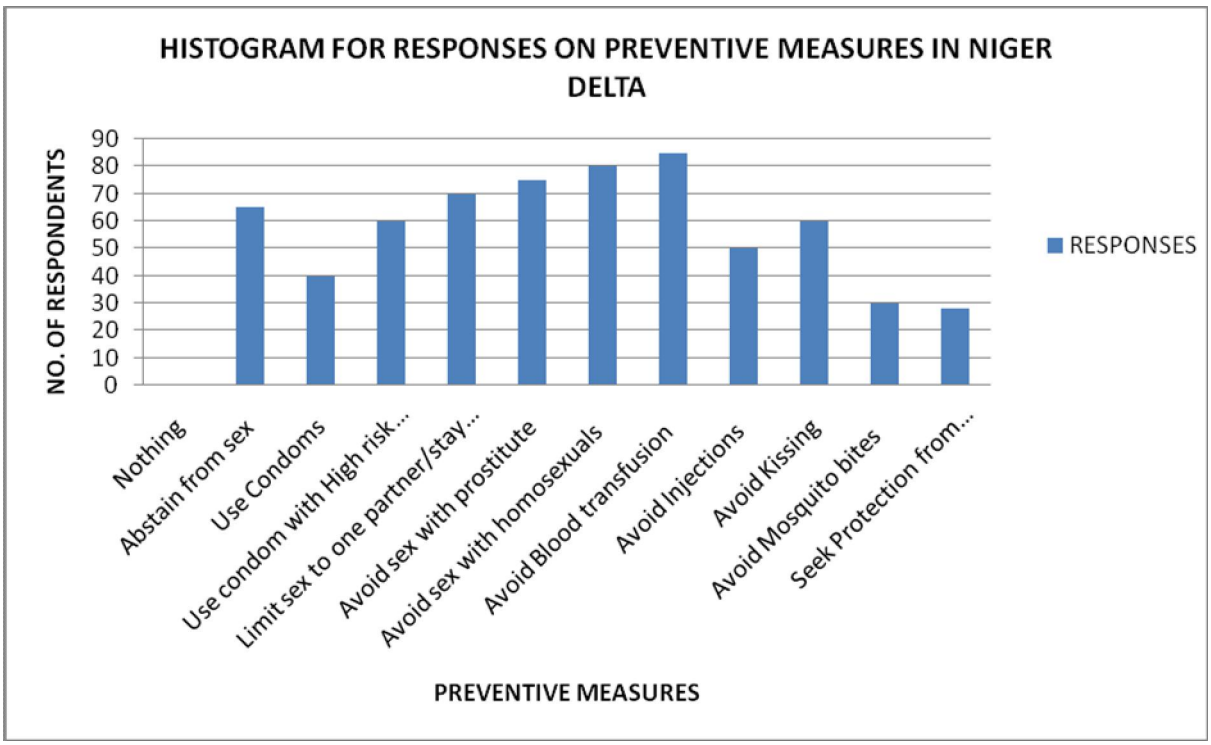
Overall results in Figures 11 and 12 show that higher proportions of participants in the Niger delta sub-sample reported having acquired information about HIV/ AIDS from private health care workers, newspapers and community health workers compared to participants from the Abuja sub-sample. The results also show that lower proportions of participants from the Niger Delta sub-sample reported having acquired information about HIV/ AIDS from the other sources compared to participants from the Abuja sub-sample. Finally the results show that in both sub-samples no participants reported having acquired information about HIV/ AIDS from a library or community/ pubic meetings.

Awareness about preventive measures against HIV/ AIDS

The distributions of study subjects' responses according to preventive measure against HIV/ AIDS for the Niger Delta and Abuja sub-samples are shown in Figures 13 and 14 below.

Results in Figure 13 show that 60% or more of participants in the Niger Delta sub-sample indicated that HIV/ AIDS could be prevented by abstaining from sex, using condoms with high risk partners, limiting sex to one partner/ staying loyal , avoiding blood transfusion and avoiding kissing. The results also show that 50% of participants reported that HIV/ AIDS could be prevented by avoiding injections, 40% reported that HIV/ AIDS could be prevented by using condoms and 30% reported that HIV/ AIDS could be prevented by avoiding mosquito bites and by seeking protection from traditional healers.

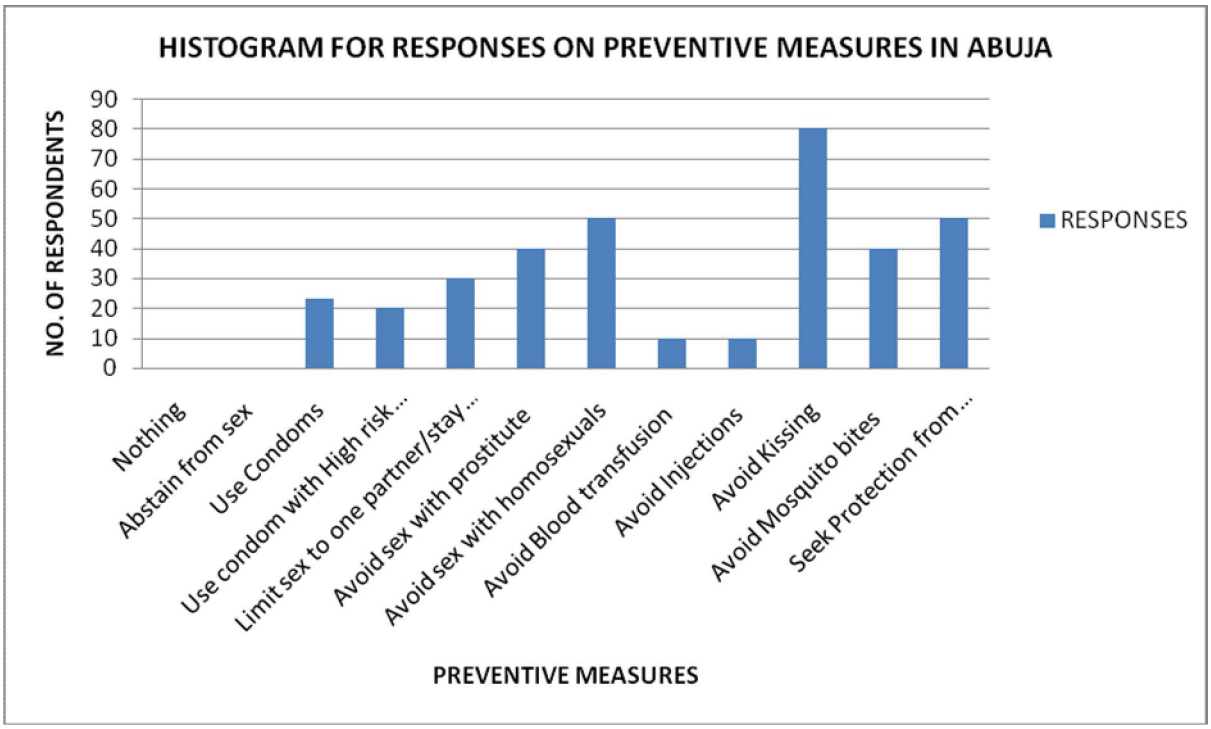
Figure 13: Histogram showing distribution of study participant responses by preventive measure against HIV/ AIDS for the Niger Delta sub-sample



Results in Figure 14 show that 50% or more of participants in the Abuja sub-sample indicated that HIV/ AIDS could be prevented by avoiding sex with homosexuals, by avoiding kissing and by seeking protection from traditional healers, respectively. The

results also show that 40% of participants reported that HIV/ AIDS could be prevented by avoiding sex with a prostitute and by avoiding mosquito bites; 20 – 30% of participants reported that HIV/ AIDS could be prevented by using condoms, by using condoms with high risk partners and by limiting sex to one partner/ staying loyal. Finally the results also show that none of the participants reported that HIV/ AIDS could be prevented by abstaining from sex while 10% reported that HIV/ AIDS could be prevented by avoiding blood transfusions and by avoiding injections.

Figure 13: Histogram showing distribution of study participant responses by preventive measure against HIV/ AIDS for the Abuja sub-sample

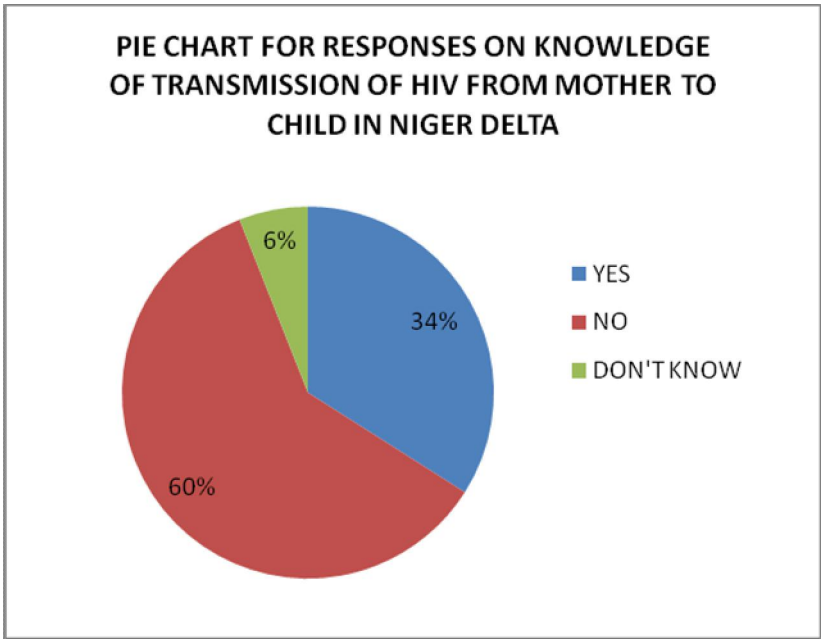


Overall results in Figures 13 and 14 show that higher proportions of participants in the Niger Delta sub-sample reported that HIV/ AIDS could be prevented by most of the different preventive measures compared with participants in the Abuja sub-sample. Interestingly 60% or more of participants in both sub-samples indicated that HIV/ AIDS could be prevented by avoiding kissing while only 40% or less of participants in both sub-samples indicated that HIV/ AIDS could be prevented by using condoms.

Awareness about mother-to-child transmission

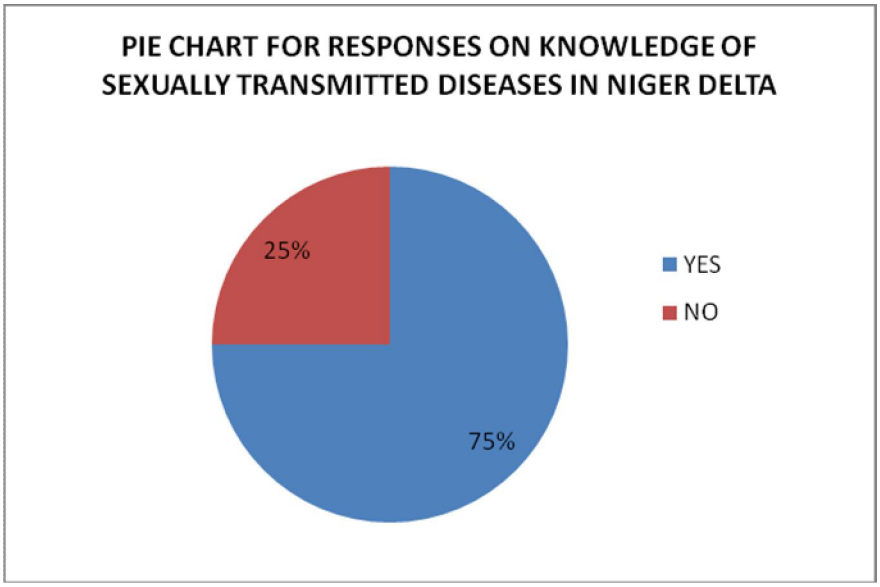
The distributions of study subjects' responses according to awareness about mother-to-child transmission of HIV/ AIDS for the Niger Delta and Abuja sub-samples are shown in Figures 15 and 16 below.

Figure 15: Pie chart showing distribution of study participants' responses on awareness about mother-to-child transmission of HIV/ AIDS for the Niger Delta sub-sample



Results in Figure 15 show that 34% of participants in the Niger Delta sub-sample reported that they were aware that HIV/ AIDS could be transmitted from mother-to child while 60% of participants reported that they were not aware. The rest of the participants reported that they did not know whether HIV/ AIDS could be transmitted from mother to child or not.

Figure 16: Pie chart showing distribution of study participants' responses on awareness about mother-to-child transmission of HIV/ AIDS for the Abuja sub-sample



Results in Figure 15 show that 50% of participants in the Abuja sub-sample reported that they were aware that HIV/ AIDS could be transmitted from mother-to child while 40% of participants reported that they were not aware. The rest of the participants reported that they did not know whether HIV/ AIDS could be transmitted from mother to child or not.

Overall results in Figures 15 and 16 show that a lower proportion of participants in the Niger Delta sub-sample reported that they were aware that HIV/ AIDS could be transmitted from mother to child compared to participants in the Abuja sample. Conversely the results also show that a lower proportion of participants in the Niger Delta sub-sample reported that they did not know whether or not HIV/ AIDS could be transmitted from mother to child compared to participants in the Abuja sample.

Results from analyses show that 75% of participants in the Niger Delta sub-sample and 56% of participants in the Abuja sub-sample reported that they were aware that sexually transmitted diseases increase chances of contracting HIV/ AIDS. Results also show that only 25% of participants in the Niger Delta sub-sample and 44% in the Abuja sub-sample reported that they were not aware that sexually transmitted diseases increase chances of contracting HIV/ AIDS.

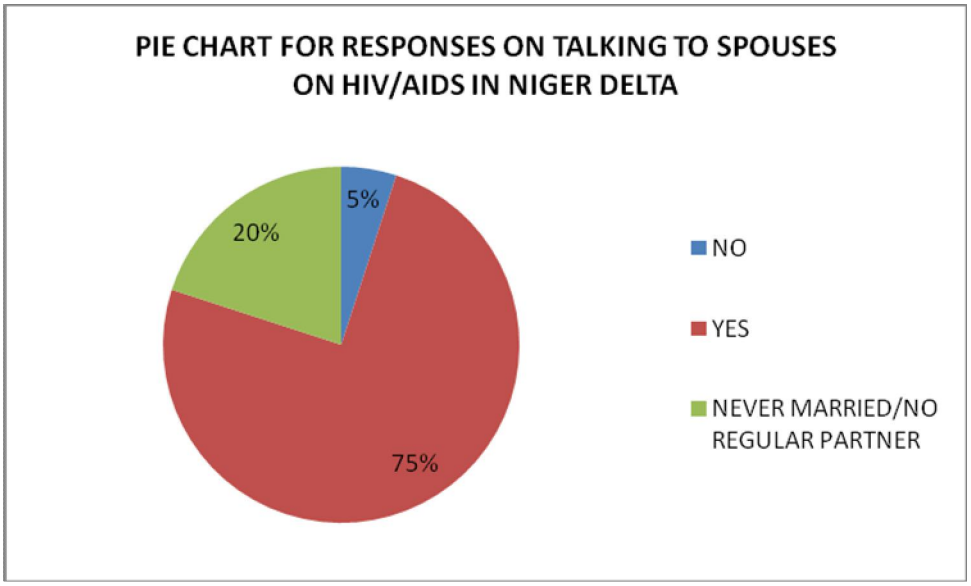
4.2.3: Risky sexual behaviour related to HIV/ AIDS

Communicating about HIV/ AIDS with sexual partners

The distributions of study subjects' responses about talking to spouses/ partners about HIV/ AIDS for the Niger Delta and Abuja sub-samples are shown in Figures 17 and 18 below.

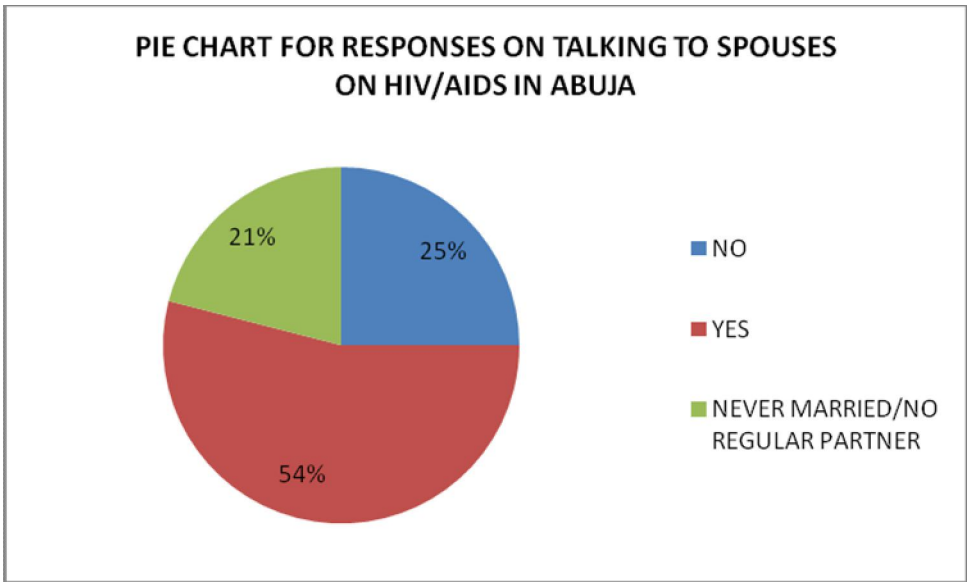
Results in Figure 17 show that 75% of participants in the Niger Delta sub-sample reported that they had talked to their spouse/ partner about HIV/ AIDS and only 5% reported that they had not. The results also show that about a fifth of participants reported that they did not have a spouse or partner that they could have talked to about HIV/ AIDS.

Figure 17: Pie chart showing distribution of study participants' responses on talking to spouses/ partners about HIV/ AIDS for the Niger Delta sub-sample



Results in Figure 18 show that 54% of participants in the Abuja sub-sample reported that they had talked to their spouse/ partner about HIV/ AIDS and 25% reported that they had not. The results also show that about a fifth of participants reported that they did not have a spouse or partner that they could have talked to about HIV/ AIDS.

Figure 18: Pie chart showing distribution of study participants' responses on talking to spouses/ partners about HIV/ AIDS for the Abuja sub-sample

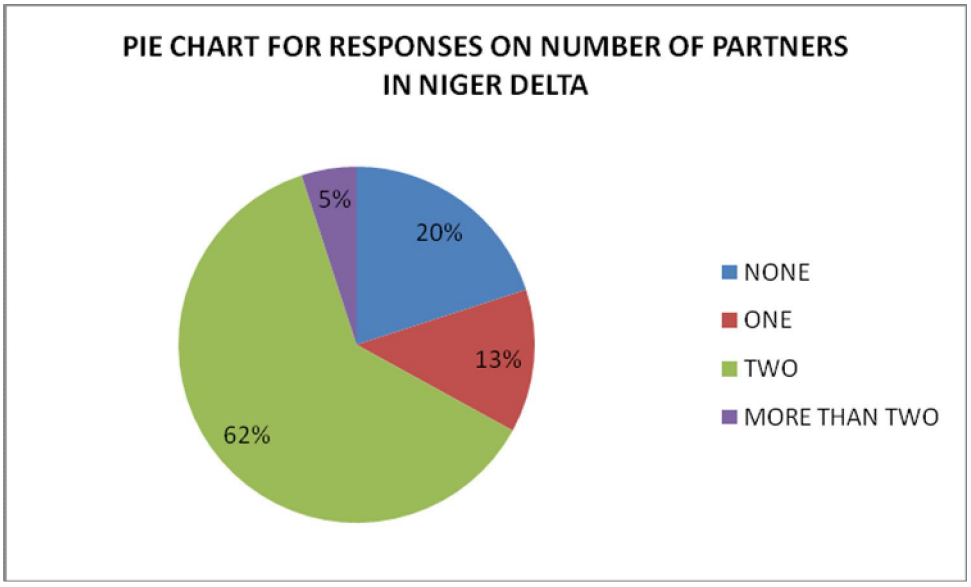


Number of sexual partners

The distributions of study subjects' responses about the number of sexual partners for the Niger Delta and Abuja sub-samples are shown in Figures 19 and 20 below.

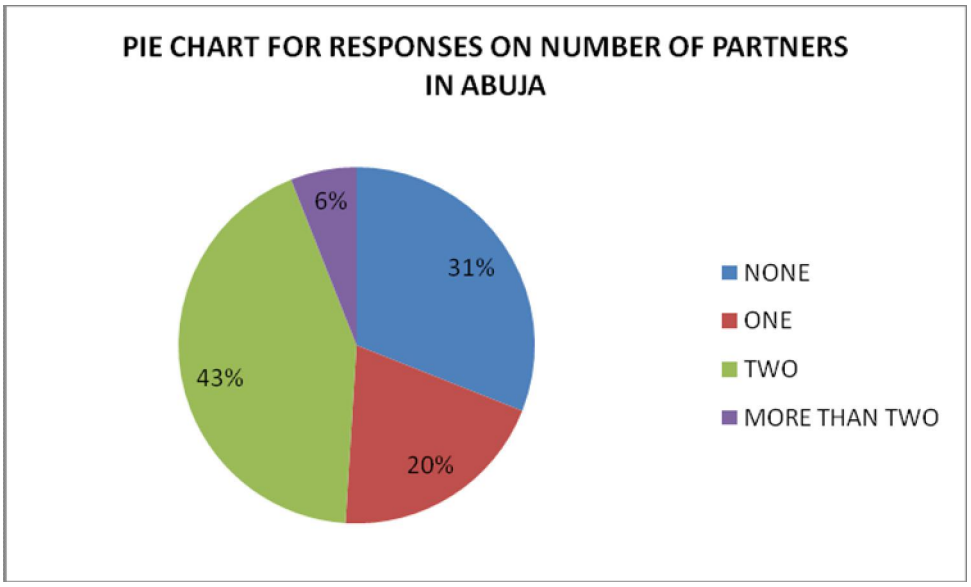
Results in Figure 19 show that 62% of participants in the Niger Delta sub-sample reported that they had 2 sexual partners, 20% reported that they had no sexual partners, 13% reported that they had one sexual partner and 5% reported that they had more than 2 sexual partners.

Figure 19: Pie chart showing distribution of study participants' responses about the number of sexual partners the Niger Delta sub-sample



Results in Figure 20 show that 43% of participants in the Abuja sub-sample reported that they had 2 sexual partners, 31% reported that they had no sexual partners, 20% reported that they had one sexual partner and 6% reported that they had more than 2 sexual partners.

Figure 20: Pie chart showing distribution of study participants' responses about the number of sexual partners the Abuja sub-sample



Overall results in figures 19 and 20 show that a higher proportions of participants in the Niger Delta sub-sample had two sexual partners compared to participants in the Abuja sub-sample. The results also show that lower proportions of participants in the Niger delta sub-sample had no or only one sexual partner compared to participants in the Abuja sub-sample.

Use of condoms

Finally results from analyses show that only 19% of participants with sexual partners in the Niger delta sub-sample and 76% in the Abuja sub-sample reported that they used condoms with their sexual partners. Alternatively the results show that 81% of participants with sexual partners in the Niger delta sub-sample and nearly a quarter in the Abuja sub-sample reported that they di not use condoms with their sexual partners.

4.3: DISCUSSION

4.3.1: Basic characteristics

Although the sampling technique used for the research reported on here was non-probabilistic, which makes discussion of response rates rather irrelevant, it is still noteworthy that all the people who were asked to take part in the study agreed and completed the study questionnaire. This was probably because the researchers being able to clearly explain the purpose of the study, confidentiality and anonymity of responses, and potential benefits of the results to the local community and the country. Generally response rates from self-administered questionnaire surveys are deemed very good if 75 to 100% of those given questionnaires return them completed (Bowling 2002).

Results from analyses of age of participants in the study showed that the distribution of study participants' ages in the two sub-samples were similar for the 16 – 20 years age group and that there were more participants in the 21 – 25 and 36 – 40 year age groups for the Niger Delta sub-sample than the Abuja sub-sample and that there were fewer participants in the remaining age groups for the Niger Delta sub-sample

compared to the Abuja sub-sample. Notwithstanding the implications of non-probabilistic sampling methods used in the study it can be argued that overall, however the age distributions of participants in both sub-samples were fairly similar thus allowing basic comparisons within the two sub-samples. This assumption implies that results from this study within themselves can be taken to be indicative of views of study participants.

Result from analyses also showed that that the majority of participants were in the older age groups for both sexes in the Niger Delta sub-sample compared to the Abuja sub-sample and that the age distribution for participants was similar for both sexes in the Abuja sub-sample compared to the Niger Delta sub-sample. These results firstly suggest that despite the apparent overall picture of similarity in age distribution between the two sub-samples, there were subtle variations accounted for by gender. Secondly the results suggest that a higher proportion of older people were recruited to the Niger Delta sub-sample compared to participants from the Abuja sub-sample. This however could have happened purely by chance. It could also suggest that a higher proportion of people who visited the pharmacy at the time of the study in the Niger Delta were older compared to those who visited the pharmacy in Abuja. Thirdly, given the non-probabilistic sampling used for the study, these results could suggest subtle bias in the selection of people who were approached by the two researchers in the Niger Delta and in Abuja. Nevertheless this bias would not appear to be material especially given that the overall age profiles were similar as noted above.

Results from analyses showed that there were higher proportions of participants with no formal or primary level education in the Niger Delta sub-sample compared to the Abuja sub-sample. The results further showed that there were lower proportions of participants with secondary, post secondary and tertiary level education in the Niger Delta sub-sample compared to the Abuja sub-sample. These results suggest that there were clear disparities between participants from the two sub-samples in terms of educational levels. Perhaps this is because the Niger Delta economy is more focused on primary producing industries that tend to draw semiskilled and unskilled (i.e. Low education level) work forces and their dependants. While Abuja being the

federal capital would have a higher proportion of service industries that would tend to draw more skilled (and more educated) work forces and their dependants. The results would also suggest that it would be reasonable to expect differences in views and knowledge about health issues including HIV/ AIDS between the two sub-samples given these clear differences in educational levels.

Finally results from analyses showed that higher proportions of participants in the Niger Delta sub-sample were single or living in union compared with those from the Abuja sub-sample and that lower proportions of participants in the Niger Delta sub-sample were married, divorced or widowed compared with those from the Abuja sub-sample. These results when taken together with the observed age-by-sex distribution, suggest that there is a lower level of social stability and security among participants in the Niger Delta sub-sample compared to participants from the Abuja sub-sample. This argument in turn suggests that it would be reasonable to expect higher levels of risky sexual behaviour among participants from the Niger Delta sub-sample compared with participants from the Abuja sub-sample.

4.3.2: Awareness about sources of information on HIV/ AIDS

Results from this study showed that higher proportions of participants in the Niger Delta sub-sample reported that they acquired information about HIV/ AIDS from private health care workers, newspapers and community health workers compared with participants from the Abuja sub-sample. These results firstly suggest very clear difference in reported sources of information that seems to counter expectations. This is exemplified by the fact that more participants from the more arguably primary industry-dependant Niger Delta reported that they actually acquired information from private health care workers instead of government health care services compared to participants from the federal capital, Abuja. Similarly it is also interesting to note that participants from the Niger Delta reported that they actually acquired information from newspapers compared to participants from the federal capital, Abuja. Secondly the results suggest that the sources of information highlighted here were and could probably be important as media for health education and promotion in the Niger Delta. However this extrapolation cannot be made on the basis of this study.

The results also showed that lower proportions of participants from the Niger Delta sub-sample reported that they had acquired information about HIV/ AIDS from all the other sources compared to participants from the Abuja sub-sample and finally that in both sub-samples no participants reported having acquired information about HIV/ AIDS from a library or community/ public meetings. These results suggest that higher proportions of participants from the Abuja sub-sample had accessed government and private health care workers compared to participants from the Niger Delta sub-sample. Taken together with results above, it appears that there were clear disparities in the types of sources of information on HIV/ AIDS between the two sub-samples. What is not clear is whether and why these differences actually exist. It is however possible that there are in fact inequitable distributions in sources of information on HIV/ AIDS between the two areas given that it has been observed that nearly two-thirds of the population in the Niger delta region live below 1 United States dollars per day (UNDP 2006). However this explanation cannot be confidently inferred from results of the study reported here.

4.3.3: Knowledge about HIV/ AIDS

Overall results from analyses showed that 95% or more of participants in both sub-samples indicated that they knew what to do to avoid contracting HIV/ AIDS, while 90% of participants in both sub-samples indicated that they knew that HIV caused AIDS. These findings are broadly encouraging as they suggest that very high proportions of study participants were aware about the cause and how to prevent contracting HIV/ AIDS. These results seem consistent with those from the William et al (2003), Odosanya et al (2004) and Eke et al (2007) studies that showed high levels of awareness about HIV/ AIDS.

Results from this study showed that higher proportions of participants in the Niger Delta sub-sample reported that HIV/ AIDS could be prevented by most of the different preventive measures compared with participants in the Abuja sub-sample. These results suggest that participants from the Niger Delta sub-sample were more aware of different preventive measures against HIV/ AIDS compared to participants

from the Abuja sub-sample. These results seem to contradict earlier observations about differences in the age and educational level profiles for the two sub-samples. Notwithstanding that the author is aware that awareness programmes have been conducted in the Niger Delta region by different agencies such as Society for Family Health in conjunction with KAMSCO PHARMACEUTICAL LIMITED. These results also seem to differ from those from the Sibanda (2002) where participants from the urban area had higher level of knowledge and awareness about HIV/AIDS compared to participants from rural areas. It is not possible to draw further and firmer comparisons between the different studies due to methodological and contextual considerations.

Interestingly the results also showed that 60% or more of participants in both sub-samples indicated that HIV/ AIDS could be prevented by avoiding kissing while only 40% or less of participants in both sub-samples indicated that HIV/ AIDS could be prevented by using condoms. These results suggest that first there are clear misconceptions about the level of risk of HIV/ AIDS transmission through kissing among participants from both sub-samples. Secondly it is also clear that the majority of participants from both sub-samples were not aware that HIV/ AIDS can be prevented through use of condoms. This is an important finding given the amount of effort that has gone into marketing and promoting condoms as a tool for preventing spread of HIV/ AIDS. It is also important because it suggests that at least within the study sample there is a lot of unmet need for accurate information on measures for preventing HIV/ AIDS.

Results from the study reported here showed that a lower proportion of participants in the Niger Delta sub-sample reported that they were aware that HIV/ AIDS could be transmitted from mother to child compared to participants in the Abuja sample and that a lower proportion of participants in the Niger Delta sub-sample reported that they did not know whether or not HIV/ AIDS could be transmitted from mother to child compared to participants in the Abuja sample. Besides these results appearing to be consistent with expectations that the higher proportions of participants with

formal education (i.e. from the Abuja sub-sample) would also report being aware about different aspects of HIV/ AIDS, the results do suggest that there was a high level of unmet need for information of ways through which HIV/ AIDS could be transmitted. The results also appear to differ from those from the studies by Mapule and Jail (2008) and by Igwegbe et al (2005), but it can be argued that the older studies only focused on pregnant women.

4.3.3: Risky behaviour related to HIV/ AIDS

Study results showed that higher proportions of participants in the Niger Delta sub-sample had two sexual partners compared to participants in the Abuja sub-sample and also that lower proportions of participants in the Niger delta sub-sample had no or only one sexual partner compared to participants in the Abuja sub-sample. These results suggest that higher proportions of participants from the Niger Delta sub-sample reported signs that pointed towards risky sexual behaviours compared to participants from the Abuja sub-sample. This observation would seem to confirm expectations arising from earlier observations from results on differences in educational level and marital status between the two sub-samples. It was expected that higher proportions of participants from the Niger Delta sub-sample (with the potentially weak social security and poor social stability as well as low levels of formal education) would also report risky sexual behaviours in relation to HIV/ AIDS unlike participants from the Abuja sub-sample.

Finally results from analyses showed that less than a fifth of participants with sexual partners in the Niger delta sub-sample and more than three-quarters of participants in the Abuja sub-sample reported that they used condoms with their sexual partners. These results alternatively showed that 81% of participants with sexual partners in the Niger delta sub-sample and nearly a quarter in the Abuja sub-sample reported that they did not use condoms with their sexual partners. These results clearly show the marked differences between participants in the two sub-samples in terms of signs of risky sexual behaviour concerning HIV/ AIDS. Secondly the results also

seem to conform to expectations that higher proportions of participants from the Niger Delta sub-sample (with the potentially weak social security and poor social stability as well as low levels of formal education) would also report risky sexual behaviours in relation to HIV/ AIDS unlike participants from the Abuja sub-sample.

4.3.4: Implications of study results

A number of implications arise from the results of this study.

Firstly, given that a convenient sample was used for this study, interpretation and extrapolation of results from this study has to be confined to the study participants. This implies that there is a need to use these results as basis for generating research questions and hypotheses that can be looked at using either probabilistic sampling or similar sampling methods to the ones used in this study to carry out further research among similar population groups and in the Niger Delta region and Abuja or other areas of interest within Nigeria.

Secondly, given the apparent disparities in the social and demographic profiles of participants from the two sub-samples, the observed differences in reported signs of risky sexual behaviours relating to HIV/ AIDS among participants from the two sub-samples, it is clear there is a need to formally investigate whether there are any associations between these and perhaps other factors in terms of risky sexual behaviours relating to HIV/ AIDS.

Thirdly and notwithstanding the issue raised in the foregoing paragraph, the observed differences in terms of signs of risky sexual behaviour relating to HIV/ AIDS among the sub-sample from the Niger Delta region, it is clear that proactive action perhaps based on an initial health information and wider needs assessment, is needed to help mitigate the apparent or potential prevalence of risky sexual behaviour relating to HIV/ AIDS that these results suggest.

4.4: RECOMMENDATIONS

4.4.1: Further research

A number of recommendations can be made based on the results of the research work reported here. Firstly given the limitations of this study it is important for follow up research to be done to explore some of the observations made in this report. For instance a cross sectional study or in-depth interviews or focused group discussions could be carried out to examine the issues relating to the disparity between the high levels of of awareness about HIV/ AIDS and apparent high level of risky sexual behaviour relating to HIV/ AIDS. Research could also investigate any potential associations between social and demographic factors awareness and risky sexual behaviour. The research could focus on the two geographic regions covered in the research reported here or extend to other areas in Nigeria.

This research work reported here may also need to be replicated in other areas in Nigeria to build up the evidence base on which further research questions and hypotheses can be formulated.
This same study, this time using a larger sample size questionnaire collected from different areas in the region

4.4.2: Government policies

Some recommendations can also be made regarding policies that impact on people's health in the two regions studied here. Firstly an urgent review of all existing policies regarding poverty alleviation in the Niger Delta and perhaps Abuja is needed to help tackle factors underlying poverty-related risky health behaviours such as unprotected and unsafe sex.
Secondly the Niger Delta Development Commission should look at ways to create a functional and resourced public health enlightenment programme in each local government area of the region. These programmes should help tackle and sustain knowledge about HIV/ AIDS and translation of this knowledge into changes in risky health behaviours such as unprotected and unsafe sex and help people of the Niger Delta region to be more cultured about the importance of practising safe sex, stressing on abstinence, being faithful to one sex partner and practising safe sex

(e.g. using condoms). The programmes should take into consideration wider determinants of health such as local cultural beliefs and practices, health education and other social, economic and political factors that influence health.

Thirdly the Niger Delta Development Commission should look at ways to develop a functional and resourced public health programme in each local government area of the region to provide accessible and affordable preventive services such as HIV/AIDS counselling and testing, provision of preventive technologies (e.g. condoms) and treatment facilities for people with HIV/ AIDS.

The federal and state governments should look for ways to engage youths in the Niger Delta region with meaningful job opportunities in order to prevent unemployment, idleness and social problems that come with the former two problems. These initiatives can be conducted in conjunction with non-governmental, religious organisations and private sector partners including the oil companies. Sustained programmes should be aimed at tackling wider issues that influence health and help empower vulnerable groups such as women and youths to actively manage health issues such as reproductive health and sex.

4.5: CONCLUSIONS

This study builds on previous research carried out in the sub Saharan Africa and especially Nigeria and establishes to what level of awareness, knowledge and sexual risk behaviour is noticed by the people of the Niger delta region in relation HIV/AIDS when compared to their Abuja counterparts.

Although the Abuja respondents have a higher level of awareness concerning HIV/AIDS when compared to their Niger delta respondents, the Niger delta and Abuja respondent displayed a high level of awareness as it concerns HIV/AIDS.

It is overwhelming that despite the high level of knowledge as regards to HIV/AIDS displayed by the Niger delta respondents when compared to their Abujacounterparts, the Niger delta respondents are more likely to be involved in risky sexual behaviour.

CHAPTER FIVE

This chapter looks at the plan of dissemination of research result, the reflection of study and the limitations observed when undertaking this research work.

5.1: DISSEMINATION OF RESULTS

Boynton (2005) states that all too often researchers never disseminate their findings, having worked on HIV/AIDS cases in the sensitive volatile area of the Niger delta region in order to undertake this research, it is expedient that the research be disseminated. Also this research will be disseminated to recognise the contribution the people of Niger delta and Abuja have made in the area of research notwithstanding the sensitive nature of the research (sex and HIV/AIDS).

After considering the poverty level of the people of the Niger delta region couple with the effects of the oil production of the area which have caused more harm than good to the people, the researcher feels convinced that the research work should be published in order to bring and draw the attention of the necessary departments to the aid of the Niger delta people.

Having completed the research, the researcher will ensure that an Executive summary of the research work is sent to a range of stake holders. The researcher has also concluded plans to disseminate this result and findings through the provision of a multimedia presentation in the nearest feature.

The research findings are to be disseminated to the following:

- The Niger Delta Development Commission (NDDC)
- The Federal ministry of health
- All Ministries of Health in the Nine Niger Delta States of Rivers, Cross rivers, Bayelsa, Imo, Edo, Delta, Akwa Ibom, Abia and Ondo states

- The newly created Niger delta Ministry
- The ethical committee of the University of Port Harcourt teaching Hospital
- Different Public health journals
- PUBMED, SCIENCE DIRECT, BLACK WELL SYNERGY

5.2 REFLECTIONS

Having considered the different range of Models that exist which enable researchers and practitioners to carry out their work, the researcher have chosen the Gibbs reflective circle Model.(University of Luton, 2004) to narrate his experience in undertaking this research work.

The process of carrying out the rigorous research, analysing them and final putting the research work in to a standard academic writing, have been a wonderful learning experience for me.

My Initial Feelings

Since this is my first time of carrying out a research of this magnitude, I was frightened initially and also perplexed on how to effective carry out this research work to an achievable standard. Knowing that my supervisor Miss Susan Sapsed is a knowledge and approachable personal, i decided to share my fears and worries with her. To God be the Glory, after that discussion with her I got a divine direction on How to effectively carry out the research work.

Description of what I did

Having developed a standard proposal for the research work in February 2008, I worked with the Aim and Objective of the proposal by carefully examining and exploring the different studies that have been carried out on HIV/AIDS in the Sub-

Saharan Africa. Having accomplished that, I prepare a well structured questionnaire that will help me achieve my aims and objectives of the research at the same time answer the research question. A Pilot study of the questionnaire formed was carried out, and the corrections observed during the pilot study were put in the final questionnaire given to the respondents. In the course of this research work I and write ups, I consulted order dissertations/thesis that are in the Library to ensure that not just a good dissertation is produce but a dissertation that meet the basic requirement expected of me as an Msc. Public Health student.

Further Feelings & Evaluation:

Having worked under the supervision of Susan Sapsed, I have gained considerable knowledge in the area of critical academic thinking and development at the same time been able to manage my time well. The Mentorship skills i learnt from my caring supervisor have given me the zeal to stay focused and be self motivated, thus encouraging me to give my best to the research work.

During the course of the work, I developed the desired skills needed to analyse and discuss my findings which are my major gains during this work.

However, during the course of this research work, there are time I felt tired and stress up because of rigorous writing and scientific thinking which was couple with news from My Mum that my aunty of whom I love so much was seriously ill . Thus presenting some challenges to me which eventually slowed down the paste of this research work.

My Analysis of Everything:

Above all it has been worthwhile carrying out this research work to the end. Reason that it have been one of the driving force that have brought and kept me to public health, which is to see that the basic health needs of the poor and less privileged in the society are met through careful research work that will lead to applicable recommendations. Also this research have been worthwhile because it have given

me the basic skills needed to carry in carrying out a HIV/AIDS comparative study of this nature that is all sex inclusive. In all I am pleased with the knowledge and experience obtained from this work and that I have been able to convert all the knowledge and skills obtained in the pursuit of my Master in public health programme into practise.

5.3: LIMITATIONS

The main limitations to this study are that the researcher was unable to use a substantial number of

Participants during the research work due to the short period of time of the research and in addition

Participants that were involved in the study, that were drawn from different age groups were very few and not a complete statistical representation of the region. Hence the findings from the study will serve as a guide for a larger study. Also although this research work is not tested for statistical significance the researcher is convinced that the findings are sound and could be used to develop proposals for future research work as shown in the recommendation.

Another significant limitation of this study is that limited literature review was used in the course of this work. This was due to the following reasons.

- The Author revealed only works done in English language, and was unable to review studies carried out in order languages like French and Swahili, Portuguese.
- No recent publications was available within 2002 to 2008
- Studies like awareness level of HIV/AIDS screening not directly related to research topic were excluded

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APPENDIX 1 ETHICAL LETTERS

APPENDIX II RESULTS

RESULTS PRESENTED IN TABLE FORM

% OF AWARENESS OF HIV/AIDS IN THE NIGER DELTA REGION	
Yes	95
No	5
Total	100

% OF AWARENESS OF HIV/AIDS IN ABUJA	
Yes	97
No	3
Total	100

% OF KNOWLEDGE HOW TO AVOID HIV/AIDS IN THE NIGER DELTA REGION	
Yes	95
No	5
Total	100

% OF KNOWLEDGE HOW TO AVOID HIV/AIDS IN THE FEDERAL CAPITAL TERRITORY	
Yes	96
No	4
Total	100

% OF AWARENESS OF HIV/AIDS TRANSMISSION FROM MOTHER TO CHILD IN THE NIGER DELTA REGION	
Yes	60
No	34
Don't know	6
Total	100

% OF AWARENESS OF HIV/AIDS TRANSMISSION FROM MOTHER TO CHILD IN THE FEDERAL CAPITAL TERRITORY (ABUJA)	
Yes	40
No	50
No Idea	10
Total	100

% OF AWARENESS OF HIV/AIDS TRANSMISSION FROM SEX IN THE NIGER DELTA REGION	
Yes	75
No	25
TOTAL	100

% OF AWARENESS OF HIV/AIDS TRANSMISSION FROM SEX IN THE FEDERAL CAPITAL TERRITORY (ABUJA)	
Yes	56
No	44
TOTAL	100

% OF RISKY SEXUAL BEHAVIOUR IN THE NIGER DELTA REGION	
Yes	75
No	5
Never married/Regular sex partner	20
Total	100

% OF RISKY SEXUAL BEHAVIOUR IN THE FEDERAL CAPITAL TERRITORY (ABUJA)	
Yes	54
No	25
Never married/Regular sex partner	21

Total	100

% OF MORE THAN A SEXUAL PARTNER IN THE NIGER DELTA REGION	
ONE	13
TWO	62
MORE THAN TWO	5
Total	100

% OF MORE THAN A SEXUAL PARTNER IN THE FEDERAL CAPITAL TERRITORY (ABUJA)	
ONE	20
TWO	43
MORE THAN TWO	6
NONE	30
TOTAL	100

% OF THOSE THAT USE CONDOM WITH PARTNER IN THE NIGER DELTA REGION	
YES	19
NO	81
TOTAL	100

% OF THOSE THAT USE CONDOM WITH PARTNER IN THE FEDERAL CAPITAL (ABUJA)	
YES	76
NO	24
TOTAL	100

Questionnaire No

_____

Date: Day __ Month ___

Year ___

MALES/FEMALES - 16-4OYEARS of age **SUMMARY OF NIGER DELTA RESPONDENTS.**

MY NAME IS EBENEER BARIKPOAR; IAM A PHARMACIST BY PROFESSION. CURRENTLY I AM RUNNING A MASTERS IN PUBLIC HEALTH AT THE UNIVERSITY OF BEDFORDSHIRE UNITED KINGDOM. I AM CARRYING OUT A RESEARCH CMPARING THE LEVEL OF AWARENESS AND SEXUAL RISK BEHAVIOUR OF THE PEOPLE OF THE NIGER DELTA AND ABUJA.

PLEASE READ THE FOLLOWING STATEMENT CAREFULLY BEFORE SIGNING OR COMPLETING THE QUESTIONNAIRE.

This is a research work with the sole aim of evaluating the level of awareness and sexual risk behavior with regards to HIV/AIDS.

Your participation on this survey is important to us and is completely voluntary. If you agree to complete the questionnaire, you will answer questions regarding yourself, your ideas, attitudes and behavior regarding different aspects of HIV/AIDS prevention. Your answers

will be kept confidential and only the researchers and study personnel will have access to this information. Completing the questionnaire will take between 15 and 20 minutes; the completed questionnaires will be collected by the official representative of the Cup program and will be kept in such a manner as to guarantee your privacy.

Please mark with an X if you agree or not to complete the questionnaire.

I do not wish to complete the questionnaire ____

I agree to complete the questionnaire and do so in a completely voluntary manner. I understand that my responses will be kept confidential. _____

Signature _____

Date _____

1	How old are you?	YEARS OLD _____ DOES NOT KNOW 98
2	Are you currently in school?	NO(24) .....0 YES(76) 1
3	What is the highest level of school you attended?	NONE (33) .....0 PRIMARY(36) .....1 SECONDARY(15) .....2 POST-SECONDARY(16) .....3 OTHER, SPECIFY(1) 97
4	What is your marital status now?	SINGLE(24).....0 MARRIED(40) .....1 LIVING IN UNION(30) .....2 WIDOWED(2).....3

		DIVORCED(4).....4 SEPARATED 5
5	Have you ever had a child?	NO(35).....0 YES(65) 1
6	Do you have access to a television that works?	NO(2).....0 YES(98) 1
7	Do you have access to a radio that works?	NO NONE .....0 YES (100).....1
8	During the past <u>three</u> months have you heard or seen anything on the radio, television or newspaper about the following:	YES NO a) Family Planning/Child spacing(75) 1 0 b) HIV/AIDS PREVENTION (98) 1 0 c) The Play for Life Game Plan 1 0
9	If you have a question about HIV/AIDS, who do you ask or where do you go to get the information? Circle all the persons/places in the right column where you go to ask or find health information.	NOWHERE (10).....0 GOVERNMENT HEALTH CARE WORKER (DOCTOR /NURSE)(70).....1 PRIVATE HEALTH CARE WORKER (DOCTOR/NURSE) (30).....2 COMMUNITY HEALTH WORKER(10).....3 FAMILY PLANNING CLINIC PROVIDER(9).....4 HUSBAND/WIFE (SPOUSE)(11) .....5 OTHER RELATIVES(5).....6 FRIENDS(5).....7 RADIO(10) .....8 TV(5).....9 NEWSPAPERS/MAGAZINES .....10 LIBRARY..... 11 COMMUNITY OR PUBLIC MEETINGS...12 OTHER, SPECIFY_____ 97
10	How confident are you that you would be able to obtain a family planning/child spacing method when you need one?	(Not confident (10)..... .0 Confident (36)..... 1 Very Confident (35) 2
11	Have you ever heard of an illness called AIDS?	NO(5).....0 YES(95) 1
12	Do you know if there is anything a person	NO(5) 0

	can do to avoid getting AIDS?	YES(95)..... 1 DON'T KNOW 8
13	In your opinion what can a person do to avoid getting AIDS? Circle <u>all the answers</u> on the right column that you think would help a person to not get infected with AIDS. .	NOTHING ..... 0 ABSTAIN FROM SEX(65)..... 1 USE CONDOMS (40)..... 2 USE CONDOMS WITH HIGH-RISK PARTNERS (60) ..... 3 LIMIT SEX TO ONE PARTNER/STAY FAITHFUL TO ONE PART.(70) ..... 4 LIMIT NUMBER OF SEX PARTNERS(75) 5 AVOID SEX WITH PROSTITUTE(80)..... . 6 AVOID SEX WITH HOMOSEX (85) ..... 7 AVOID BLOOD TRANSFUS.(80) ..... 8 AVOID INJECTIONS (50) ..... 9 AVOID KISSING (60)..... 10 AVOID MOSQUITO BITES (30)..... 11 SEEK PROTECTION FROM TRADITIONAL HEALER (28)..... 12 OTHER _____ 97 (SPECIFY) Don't know 98
14	Is it possible for a healthy-looking person to be infected with the AIDS virus?	NO(35) ..... 0 YES(65)..... 1 DON'T KNOW..... 8
15	Do you know someone personally who has AIDS the virus that causes AIDS someone who died from AIDS?	NO(15),(5),(10)..... 0 YES(85)(95),(90)..... 1
16	Can AIDS be transmitted from a mother to a child?	NO(34) ..... 0 YES(60)..... 1

		DON'T KNOW(6)..... 8
17	Have you ever talked about HIV or AIDS with your spouse or regular sex partner?	NO(5) ..... 0 YES(85)..... 1 NEVER MARRIED/ NO REGULAR PARTNER(10)..... 3
18	How much are you at risk of contracting HIV/AIDS? Would you say: no risk at all, medium risk or high risk?	NO RISK AT ALL(10) ..... 1 MEDIUM RISK (55) ..... 2 HIGH RISK(35)..... 3
19	Do you know if having a sexually transmitted disease can increase the chance of a person getting AIDS?	NO(25) ..... 0 YES(75)..... 1
20	Where can one obtain a condom? Circle in the right column all the places where you know that a person can obtain a condom.	PHARMACY(40) .....1 KIOSK(5) .....2 HEALTH CENTER/HOSPITAL(30) .....3 MARKET(10).....4 SUPERMARKET(15) .....5 OTHER_____97
21	During the past month, did you encourage anyone to use condoms to avoid HIV/AIDS and other sexually transmitted diseases?	NO .....0 YES.....1
22	If a person knows that he or she has AIDS or the virus that causes AIDS, do you think that he/she should keep it private or tell other people in the community?	SHOULD KEEP IT PRIVATE(15) .....1 SHOULD TELL OTHERS(75).....2 OTHER, _____3 (SPECIFY) DON'T KNOW / NOT SURE.....98
23	How many sexual partners have u	One (13)……...1 Two……62……..3 More than

		two(5)……5
24	HOW CAN HIV/AIDS BE PREVENTED	NOTHING ..... 0 ABSTAIN FROM SEX..... 1 USE CONDOMS ..... 2 USE CONDOMS WITH HIGH-RISK PARTNERS ..... 3 LIMIT SEX TO ONE PARTNER/STAY FAITHFUL TO ONE PART. ..... 4 LIMIT NUMBER OF SEX PARTNERS ..... 5 AVOID SEX WITH PROSTITUTE ..... . 6 AVOID SEX WITH HOMOSEX ..... 7 AVOID BLOOD TRANSFUS. ..... 8 AVOID INJECTIONS ..... 9 AVOID KISSING ..... 10 AVOID MOSQUITO BITES ..... 11 SEEK PROTECTION FROM TRADITIONAL HEALER ..... 12 TAKE VITAMINS..... 13 OTHER _____ 97
25	DO YOU USE CONDOM WITH ALL OF THEM?	YES(20) OR NO(65)

APPENDIX 3 SAMPLE OF QUESTIONAIRE

Date: Day __ Month ___

Year ___

MALES/FEMALES - 16-4OYEARS of age

MY NAME IS EBENEER BARIKPOAR; IAM A PHARMACIST BY PROFESSION. CURRENTLY I AM RUNNING A MASTERS IN PUBLIC HEALTH AT THE UNIVERSITY OF BEDFORDSHIRE UNITED KINGDOM. I AM CARRYING OUT A RESEARCH CMPARING THE LEVEL OF AWARENESS AND SEXUAL RISK BEHAVIOUR OF THE PEOPLE OF THE NIGER DELTA AND ABUJA.

PLEASE READ THE FOLLOWING STATEMENT CAREFULLY BEFORE SIGNING OR COMPLETING THE QUESTIONNAIRE.

This is a research work with the sole aim of evaluating the level of awareness and sexual risk behavior with regards to HIV/AIDS.

Your participation on this survey is important to us and is completely voluntary. If you agree to complete the questionnaire, you will answer questions regarding yourself, your ideas, attitudes and behavior regarding different aspects of HIV/AIDS prevention. Your answers will be kept confidential and only the researchers and study personnel will have access to this information. Completing the questionnaire will take between 15 and 20 minutes; the

completed questionnaires will be collected by the official representative of the Cup program and will be kept in such a manner as to guarantee your privacy.

Please mark with an X if you agree or not to complete the questionnaire.

I do not wish to complete the questionnaire ____

I agree to complete the questionnaire and do so in a completely voluntary manner. I understand that my responses will be kept confidential. _____

1	How old are you?	YEARS OLD _____ DOES NOT KNOW 98
2	Are you currently in school?	NO .....0 YES.....1
3	What is the highest level of school you attended?	NONE .....0 PRIMARY.....1 SECONDARY .....2 POST-SECONDARY.....3 OTHER, SPECIFY 97
4	What is your marital status now?	SINGLE .....0 MARRIED.....1 LIVING IN UNION .....2 WIDOWED.....3 DIVORCED .....4 SEPARATED 5

5	Have you ever had a child?	NO .....0 YES.....1
6	Do you have access to a television that works?	NO .....0 YES.....1
7	Do you have access to a radio that works?	NO .....0 YES.....1
8	During the past <u>three</u> months have you heard or seen anything on the radio, television or newspaper about the following:	YES NO d) Family Planning/Child spacing 1 0 e) HIV/AIDS PREVENTION 1 0 f) The Play for Life Game Plan 1 0
9	If you have a question about HIV/AIDS, who do you ask or where do you go to get the information? Circle all the persons/places in the right column where you go to ask or find health information.	NOWHERE .....0 GOVERNMENT HEALTH CARE WORKER (DOCTOR /NURSE).....1 PRIVATE HEALTH CARE WORKER (DOCTOR/NURSE).....2 COMMUNITY HEALTH WORKER .....3 FAMILY PLANNING CLINIC PROVIDER.....4 HUSBAND/WIFE (SPOUSE).....5 OTHER RELATIVES .....6 FRIENDS .....7 RADIO.....8 TV .....9 NEWSPAPERS/MAGAZINES .....10 LIBRARY..... 11 COMMUNITY OR PUBLIC MEETINGS...12 OTHER, SPECIFY_____ 97
10	How confident are you that you would be able to obtain a family planning/child spacing method when you need one?	Not confident ..... .0 Confident ..... 1 Very Confident 2
11	Have you ever heard of an illness called AIDS?	NO .....0 YES.....1
12	Do you know if there is anything a person can do to avoid getting AIDS?	NO..... 0 YES..... 1 DON'T KNOW 8

13	In your opinion what can a person do to avoid getting AIDS? Circle <u>all the answers</u> on the right column that you think would help a person to not get infected with AIDS. .	NOTHING ..... 0 ABSTAIN FROM SEX ..... 1 USE CONDOMS ..... 2 USE CONDOMS WITH HIGH-RISK PARTNERS ..... 3 LIMIT SEX TO ONE PARTNER/STAY FAITHFUL TO ONE PART. ..... 4 LIMIT NUMBER OF SEX PARTNERS ..... 5 AVOID SEX WITH PROSTITUTE ..... . 6 AVOID SEX WITH HOMOSEX ..... 7 AVOID BLOOD TRANSFUS. ..... 8 AVOID INJECTIONS ..... 9 AVOID KISSING ..... 10 AVOID MOSQUITO BITES ..... 11 SEEK PROTECTION FROM TRADITIONAL HEALER ..... 12 OTHER _____ 97 (SPECIFY) Don't know 98
14	Is it possible for a healthy-looking person to be infected with the AIDS virus?	NO ..... 0 YES ..... 1 DON'T KNOW 8
15	Do you know someone personally who has AIDS or the virus that causes AIDS or someone who died from AIDS?	NO ..... 0 YES 1
16	Can AIDS be transmitted from a mother to a child?	NO ..... 0 YES ..... 1 DON'T KNOW 8
17	Have you ever talked about HIV or AIDS	NO 0

	with your spouse or regular sex partner?	YES ..... 1 NEVER MARRIED/ NO REGULAR PARTNER 3
18	How much are you at risk of contracting HIV/AIDS? Would you say: no risk at all, medium risk or high risk?	NO RISK AT ALL ..... 1 MEDIUM RISK ..... 2 HIGH RISK 3
19	Do you know if having a sexually transmitted disease can increase the chance of a person getting AIDS?	NO ..... 0 YES 1
20	Where can one obtain a condom? Circle in the right column all the places where you know that a person can obtain a condom.	PHARMACY ..... 1 KIOSK ..... 2 HEALTH CENTER/HOSPITAL ..... 3 MARKET ..... 4 SUPERMARKET ..... 5 OTHER _____ 97
21	During the past month, did you encourage anyone to use condoms to avoid HIV/AIDS and other sexually transmitted diseases?	NO ..... 0 YES 1
22	If a person knows that he or she has AIDS or the virus that causes AIDS, do you think that he/she should keep it private or tell other people in the community?	SHOULD KEEP IT PRIVATE ..... 1 SHOULD TELL OTHERS ..... 2 OTHER, _____ 3 (SPECIFY) DON'T KNOW / NOT SURE 98
23	How many sexual partners have u	One…….. 1 Two…….. 3 More than two……. 5

24	HOW CAN HIV/AIDS BE PREVENTED	NOTHING ..... 0 ABSTAIN FROM SEX..... 1 USE CONDOMS ..... 2 USE CONDOMS WITH HIGH-RISK PARTNERS ..... 3 LIMIT SEX TO ONE PARTNER/STAY FAITHFUL TO ONE PART. ..... 4 LIMIT NUMBER OF SEX PARTNERS ..... 5 AVOID SEX WITH PROSTITUTE ..... . 6 AVOID SEX WITH HOMOSEX ..... 7 AVOID BLOOD TRANSFUS. ..... 8 AVOID INJECTIONS ..... 9 AVOID KISSING ..... 10 AVOID MOSQUITO BITES ..... 11 SEEK PROTECTION FROM TRADITIONAL HEALER ..... 12 TAKE VITAMINS..... 13 OTHER _____ 97
25	DO YOU USE CONDOM WITH ALL OF THEM?	YES OR NO